



Pan American Health Organization Response to COVID-19

up to 31 December 2021

PAHO



Pan American
Health
Organization



World Health
Organization
REGIONAL OFFICE FOR THE
Americas

Pan American Health Organization Response to COVID-19 up to 31 December 2021

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Introduction

The COVID-19 pandemic has brought about dramatic shifts in this Region's health panorama and even how we live our daily lives. The first case in the Americas was confirmed in the United States of America on 20 January 2020, followed by Brazil in February 2020. Since then, COVID-19 has spread to all 51 countries and territories in the Region. It has been deadlier in the Americas than in any other WHO Region.

When comparing 2020 to 2021, this year was undoubtedly worse, with more than 68 million infections and 1.4 million lives lost. As the second year of the pandemic drew to a close, the Region continued to employ all resources available to control new infections, including vaccines, the use of masks, social distancing, and surveillance.

Significant progress has been made in this Region, however, to stem severe illnesses and deaths. As of 31 December 2021, 37 of the 51 countries and territories of the Americas had reached the WHO global target of 40% vaccination coverage rate, with more than 1.3 billion COVID-19 vaccine doses administered. In Latin America and the Caribbean, 56% of the population is fully vaccinated. However, millions in the Region have still not received even a single dose.

Since the beginning of the pandemic, the Pan American Health Organization has worked tirelessly to provide the countries of the Americas with its technical expertise to overcome this pandemic. Shortly after reports of this deadly virus reached the global community, the Pan American Health Organization (PAHO) activated an

organization-wide response in support of all countries and territories in the Region, to address and mitigate the impact of the COVID-19 pandemic. Working through the regional Incident Management Support Team (IMST) and country incident management teams in Latin America and the Caribbean, PAHO has provided direct technical cooperation to ministries of health and other national authorities in alignment with WHO's COVID-19 Strategic Preparedness and Response Plan.

PAHO has developed, published, and disseminated technical documents to help guide country strategies and policies to respond to this pandemic and to adapt these strategies as new variants emerge and health systems face evolving difficulties as time progressed. It has collaborated with partners in the Region and across the globe to deliver technical cooperation, including provision of evidence-based guidance, and recommendations, and to advocate for the Americas on the global stage.

The PAHO Strategic Fund, a regional technical cooperation mechanism for pooled procurement of essential medicines and strategic health supplies, has continued to ensure access to quality, safe, and effective medicines and supplies throughout the COVID-19 response. It has successfully mitigated pandemic-related supply chain disruptions and major stockouts, while continuing to strengthen demand forecasting, support quality assurance, and ensure that medicines for priority health programs remain affordable despite continuing challenges to global supply chain systems.



PAHO played a critical role in assisting countries to acquire vaccines through PAHO's Revolving Fund, in collaboration with the COVAX Facility, a groundbreaking global collaboration to accelerate the development, production, and equitable access to COVID-19 vaccines.

Throughout 2021, as vaccines began to arrive, PAHO supported countries to prepare for their distribution: installing and providing training on cold chain equipment; activating data collection systems and surveillance mechanisms for events supposedly attributable to vaccination or immunization (ESAVI); developing guidelines for vaccination operations in the field; and developing messages and communication materials to boost vaccine demand and combat misinformation and build trust in the vaccine.

There is clear evidence that where vaccines are available and administered, they are limiting severe illness and saving lives, and for this reason, increasing access to vaccines remained the Organization's top priority in 2021. Nonetheless, the current situation in the Americas indicates that suppressing the COVID-19 pandemic will continue to require a comprehensive response by all health actors, with sustained health services network capacities, public health and social

measures, targeted vaccination operations, and outbreak control measures, including early detection, investigation, and isolation of cases, as well as tracing and quarantine of contacts, particularly as new variants of concern emerge.

This report updates the situation in Latin America and the Caribbean since the publication of the last report, Pan American Health Organization Response to COVID-19 in the Americas: January–June 2021. It presents highlights of PAHO's efforts since 2020 and throughout 2021, when the Organization continued responding to emerging needs in the Region to detect, track, treat, and slow the spread of COVID-19 and arising variants of concern; acted promptly to facilitate vaccine procurement; and supported countries during each step of the vaccination process.

The section that follows presents an updated picture of the epidemiological situation in the Americas and the status of vaccination operations in the countries and territories, followed by selected highlights of PAHO's work across the Region and by country and territory. Epidemiological data are presented for the year of 2021, up to 31 December (unless indicated otherwise).



“We cannot forget that health is an investment, not an expense. As we learned with COVID-19, health is at the core of vibrant societies. It keeps people working, kids in schools, companies productive, and economies growing.”

Dr. Carissa F. Etienne, Director of PAHO





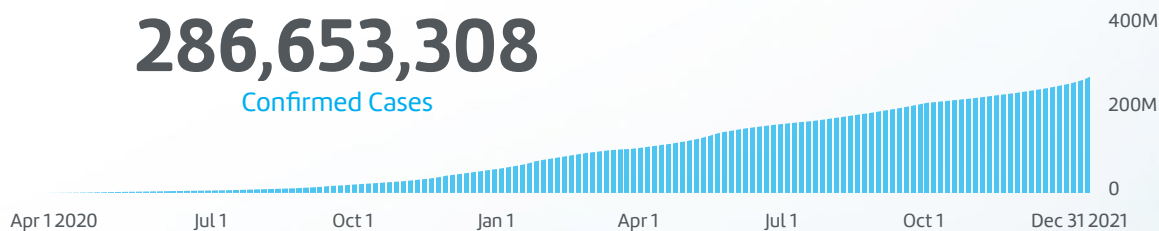
Epidemiological Situation Analysis

This section presents a picture of the epidemiological situation in the Americas and the status of COVID-19 vaccination operations in the countries and territories of the Americas. It includes selected highlights of PAHO’s work. Epidemiological data are presented as of 31 December 2021 (unless indicated otherwise).

As of that date, the Region of the Americas had reported 36% and 44% of the global COVID-19 cases and deaths, respectively.

Two countries in the Americas, the United States of America and Brazil, ranked among the 10 countries reporting the highest numbers of cumulative cases globally. These two countries also ranked as the top two countries for reported cumulative deaths globally.

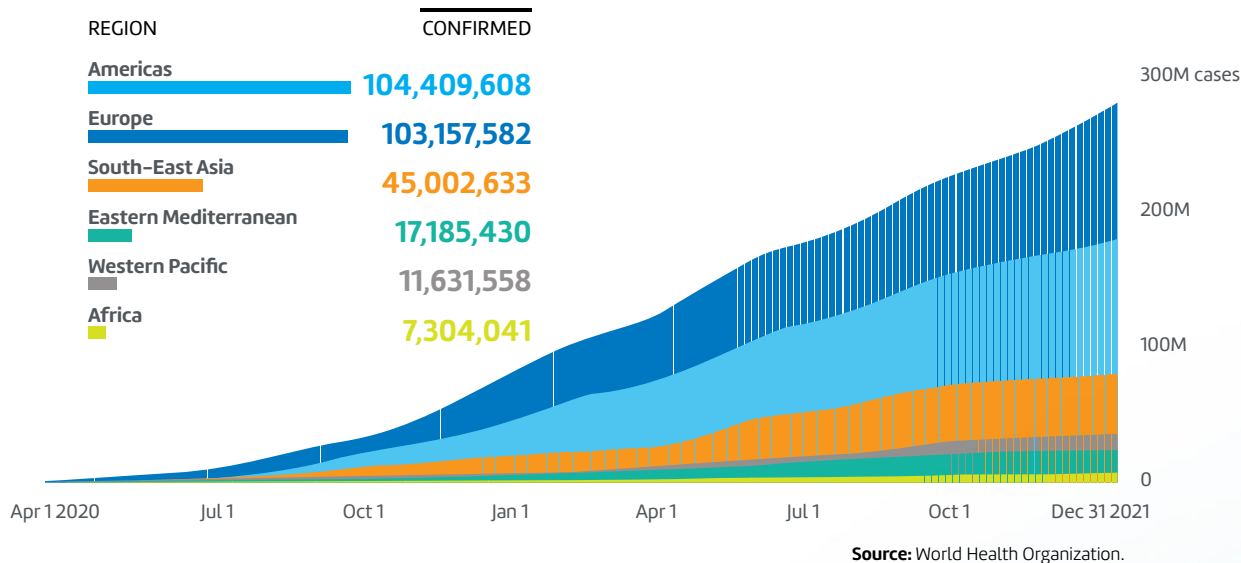
Global Situation



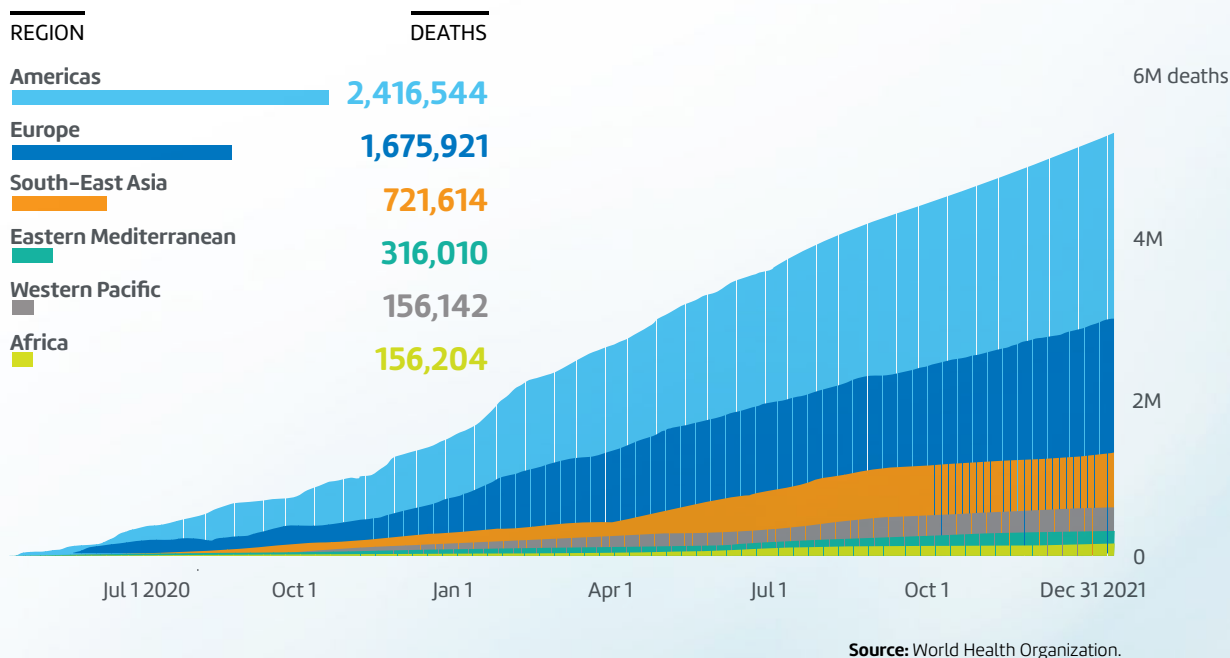
Source: World Health Organization.



COVID-19 cases reported weekly by WHO Region up to 31 December 2021



COVID-19 deaths reported weekly by WHO Region up to 31 December 2021



The most up-to-date epidemiological information on the pandemic—globally and in the Americas—is available on the PAHO website “COVID-19 Information System for the Region of the Americas,” online at: [COVID-19 trends](#).



In 2021, **56%** of cases reported in the Region were from North America and **38%** from South America.

The United States of America accounts for **50%** of cases and **32%** of deaths.

Together, Brazil and USA accounted for **71%** of all cases and **61%** of deaths reported in the Americas.

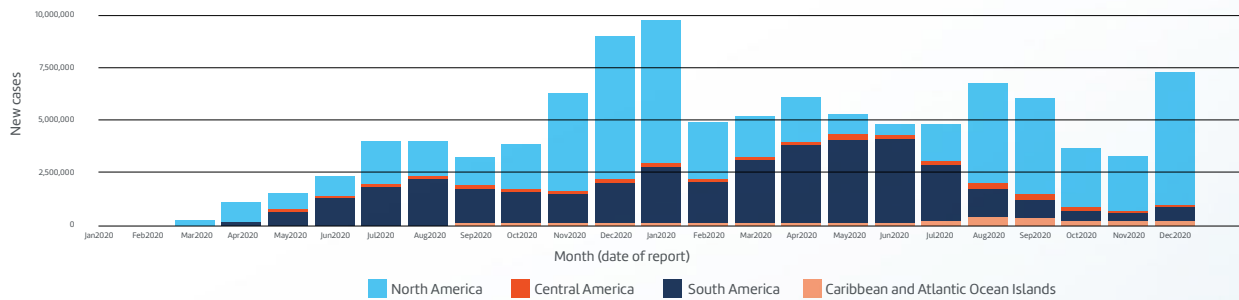
43% of total deaths in the Region were in North America and **53%** in South America.

Brazil accounted for **21%** of cases and **29%** of deaths.

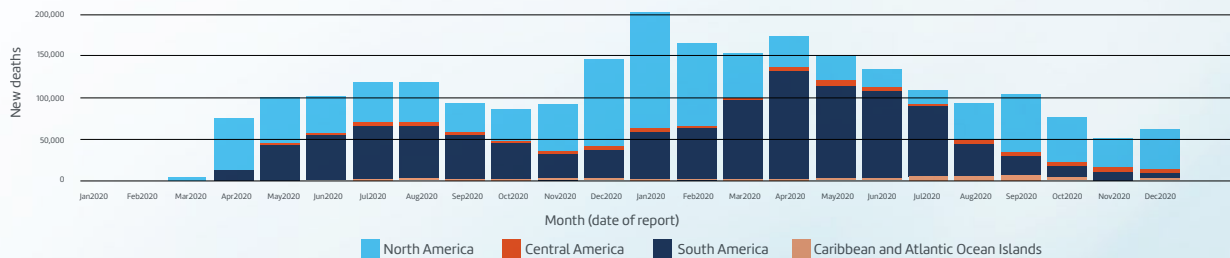
In 2021, Argentina had the third highest cumulative number of cases and deaths, **3,992,817** and **73,983**, respectively.

From 1 January to 31 December 2021. **Source:** WHO.

Distribution of confirmed COVID-19 cases, by subregion and month of report Region of the Americas, EW 1, 2020 to EW 52, 2021



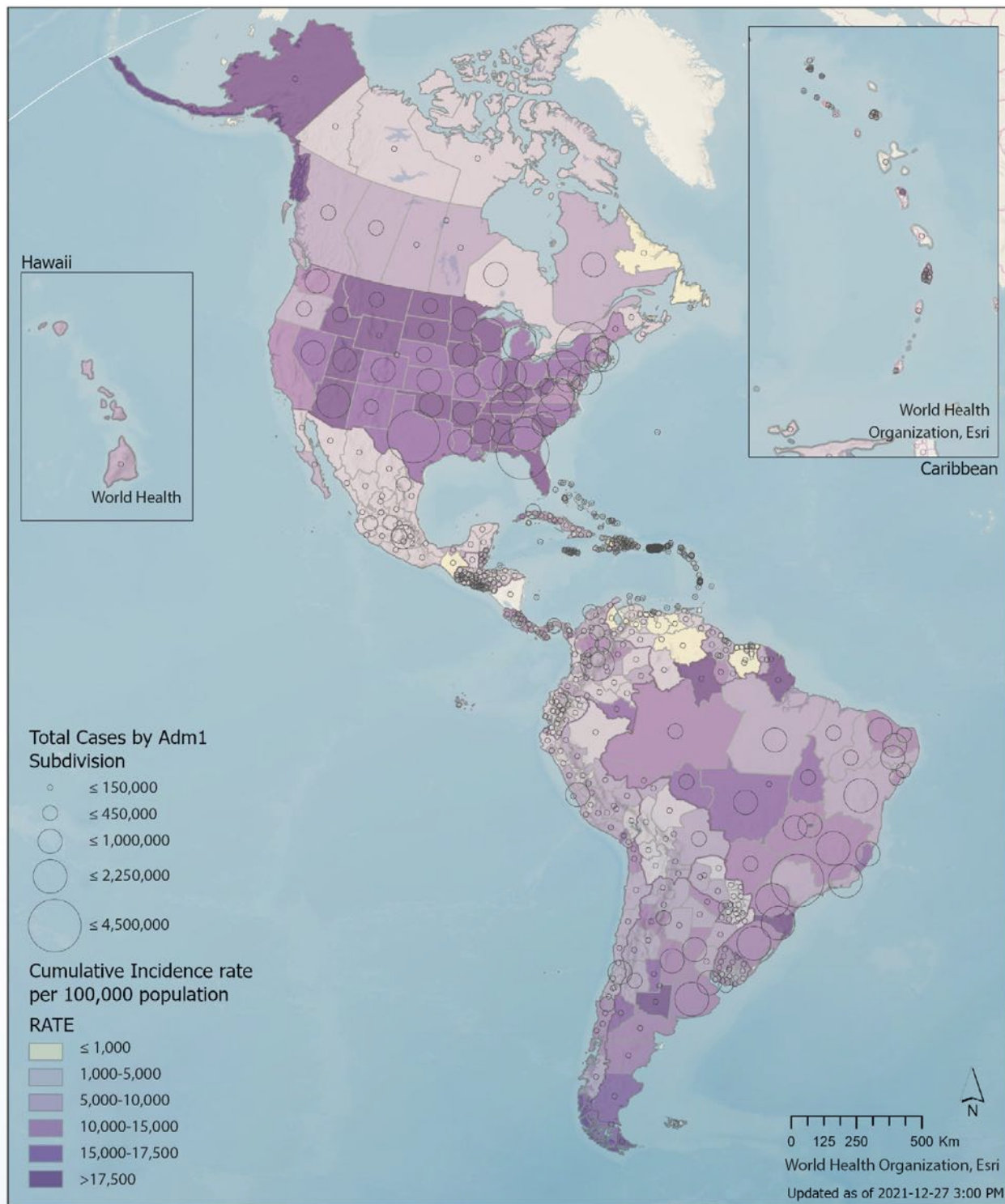
Distribution of confirmed COVID-19 deaths, by subregion and month of report Region of the Americas, EW 1, 2020 to EW 52, 2021





Country and Subregional Overview

COVID-19 reports as of 27 December 2021 / cumulative incidence rate per 100,000 population



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Cumulative cases, deaths, and crude case fatality rates (CFR%) among the 15 countries/territories reporting the highest number of cumulative case in the Americas

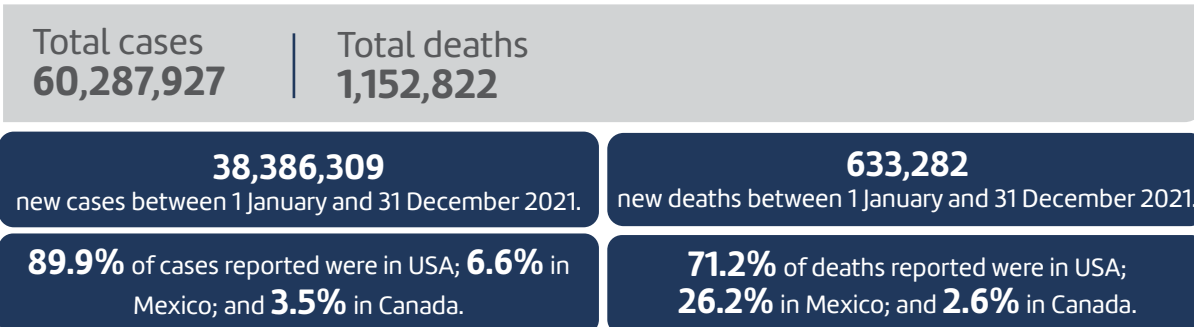
Country	Total Cases	Total Deaths	CFR (%)
United States of America	54,109,930	819,262	1.5%
Brazil	22,277,239	618,984	2.8%
Argentina	5,606,745	117,146	2.1%
Colombia	5,147,039	123,901	2.5%
Mexico	4,012,066	300,478	7.5%
Peru	2,292,254	202,653	8.8%
Canada	2,142,310	30,280	1.4%
Chile	1,806,494	39,115	2.2%
Cuba	966,004	8,322	0.9%
Guatemala	627,562	16,106	2.6%
Bolivia	599,753	19,680	3.3%
Costa Rica	571,481	7,357	1.6%
Ecuador	547,186	33,672	6.2%

Source: PAHO/WHO COVID-19 Update, Region of the Americas, 29 December 2021.



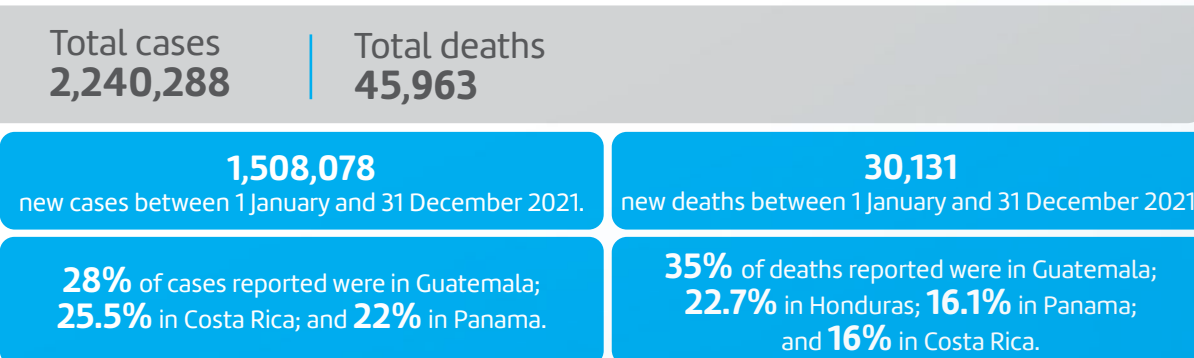
North America Subregion

Canada • Mexico • United States of America



Central America Subregion

Belize • Costa Rica • El Salvador • Guatemala • Honduras • Nicaragua • Panama





South America Subregion

Argentina • Bolivia • Brazil • Chile • Colombia • Ecuador • Paraguay • Peru • Uruguay • Venezuela

Total cases
39,793,291

Total deaths
1,190,326

26,638,859

new cases between 1 January and 31 December 2021.

768,782

new deaths between 1 January and 31 December 2021.

56% of cases reported were in Brazil; **14.5%** in Argentina; **12.9%** in Colombia; and **5.7%** in Peru.

52% of deaths reported were in Brazil; **17%** in Peru; **10.9%** in Colombia; and **9.9%** in Argentina.

Caribbean Subregion

Anguilla • Antigua and Barbuda • Aruba • The Bahamas • Barbados • Bermuda • Bonaire • Cayman Islands • Cuba • Curaçao • Dominica • Dominican Republic • Falkland Islands • French Guiana • Grenada • Guadeloupe • Guyana • Haiti • Jamaica • Martinique • Montserrat • Puerto Rico • Saba • Saint Barthelemy • Saint Kitts and Nevis • Saint Lucia • Saint Martin • Saint Pierre and Miquelon • Saint Vincent and the Grenadines • Sint Eustatius • Sint Maarten • Suriname • Trinidad and Tobago • Turks and Caicos • Virgin Islands (UK) • Virgin Islands (USA)

Total cases
2,297,413

Total deaths
28,700

1,942,508

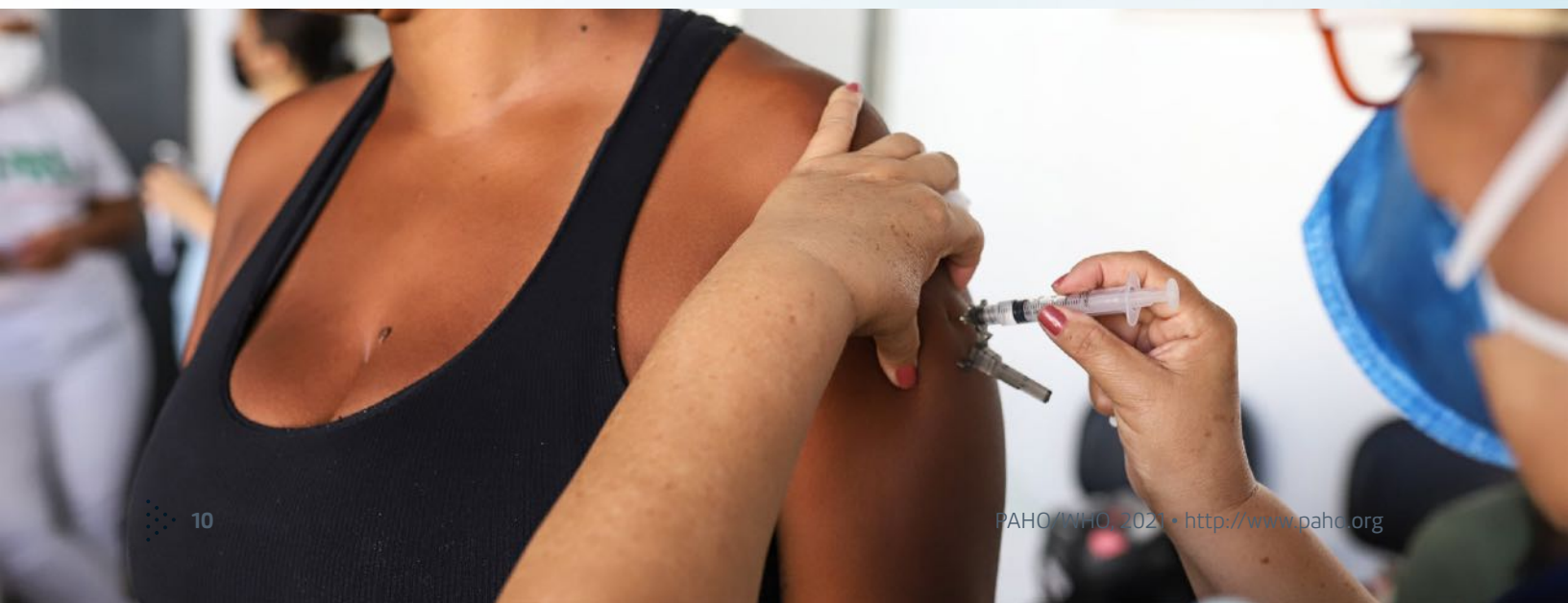
new cases between 1 January and 31 December 2021.

23,083

new deaths between 1 January and 31 December 2021.

42% of cases reported were in Cuba; **18.2%** in the Dominican Republic; and **11.8%** in Puerto Rico.

28.9% of deaths reported were in Cuba; **14.8%** in the Dominican Republic; and **11.5%** in Puerto Rico.





Multisystem Inflammatory Syndrome in Children and Adolescents (MIS-C)

Globally, various reports and scientific publications have described groups of children and adolescents requiring admission to intensive care units (ICU) due to a multisystem inflammatory condition that has certain features similar to those of Kawasaki disease and toxic shock syndrome. Based on the available evidence, WHO has provided the case definition of this syndrome, called multisystem inflammatory syndrome in children and adolescents (MIS-C) temporally related to COVID-19. Although MIS-C is considered a rare event, these cases present important challenges

for health systems and can lead to severe clinical presentations and even death.

In the Region of the Americas, PAHO began active surveillance of MIS-C cases in June 2020, inviting Member States to share a minimum set of epidemiological variables to characterize MIS-C in the Region. Between mid-May 2020 and 10 January 2022, a cumulative total of 10,002 confirmed cases of MIS-C temporally related to COVID-19, including 247 deaths, were reported in the Region of the Americas.

Indigenous Populations

The Region of the Americas is characterized by its rich multi-ethnic and multicultural heritage; this includes 54.8 million indigenous people in Latin America and the Caribbean and 7.6 million in North America. In addition to discrimination and exclusion, these indigenous populations face adverse conditions that result in inequities in areas such as health, employment, and income. COVID-19 has exposed and exacerbated many inequalities that already existed, disproportionately affecting indigenous communities that were already suffering from poverty or financial insecurity.

With the introduction of vaccines to prevent COVID-19 in 2021, there is a ray of hope for controlling the pandemic, especially in terms of reducing severe illness or death. Several countries in the Region have included indigenous peoples in the list of priority groups for vaccination, understanding their vulnerabilities and the prevailing community values.

From January 2020 through 26 November 2021, there were 710,027 confirmed cases of COVID-19, including 16,860 deaths, reported among indigenous populations in 18 countries in the Region of the Americas for which information was available.



“We must remember that the challenges and inequities that we faced prior to COVID-19 haven’t gone away during the pandemic – in fact, they’ve only worsened and can’t be overlooked. That’s why we must make protecting the lives of women a collective priority.”

Dr. Carissa F. Etienne, Director of PAHO

Women and COVID-19

According to a study on [COVID-19 Health Outcomes by Sex](#) in the Americas, published in March 2021, the impacts of the pandemic on women are less visible and not routinely quantified the same way infections are counted. This is due to a number of factors, including women’s roles and responsibilities in caring for others, their livelihoods, their exposure to domestic violence, and inequalities in terms of participating in decision-making at high levels of governance.

The Economic Commission for Latin America and the Caribbean reports that, especially in lower-income countries, women are largely engaged in informal work and other vulnerable forms of employment

(e.g., self-employment in small subsistence businesses and domestic work). This often leaves them uncovered by formal social protection measures that have targeted workers impacted economically by the COVID-19 pandemic. Under these circumstances, the pandemic has exacerbated gender inequality, as women have disproportionately faced increased unemployment and poverty. The economic impact of the pandemic must also look at the gender gap in terms of hours of work. In the last two years, this gap has increased, as mothers with young children are more likely than their male counterparts to experience a reduction in work hours.



Health Care Workers

Health care workers are the foundation of health systems and a driving force for achieving universal health coverage and global health security.

Their commitment and professionalism throughout the pandemic have been evident to all. However, too many health care workers have become infected, fallen ill, or died as a result of COVID-19. These deaths are a tragic loss. They also leave an irreplaceable gap in the world’s response to the pandemic.

From the first confirmed cases of COVID-19 in the Region of the Americas through the end of 2021, 2,461,102 COVID-19 cases have been reported among health care workers, including 13,110 deaths, according to the data made available by countries and territories in the Americas.

The highest numbers of confirmed cumulative cases among health workers are reported in the USA: 515,527; Brazil: 498,422; and Mexico: 244,711.

2,461,102 COVID-19 cases reported among health care workers in the Region of the Americas.

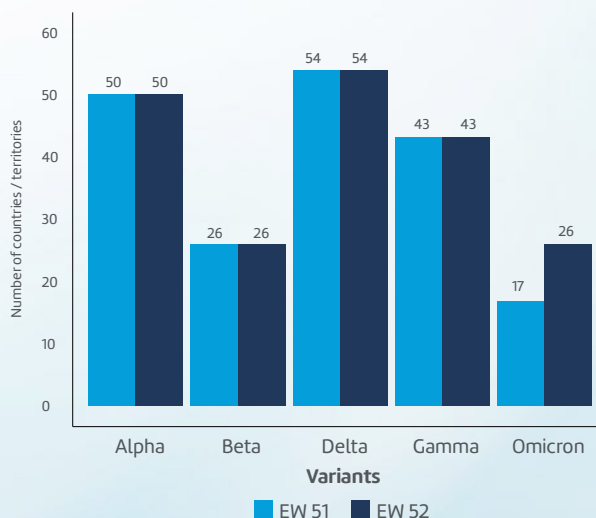
13,110 deaths from COVID-19 reported among health care workers.

Numbers reflect data made available by countries and territories in the Americas.

Variants of Concern (VOC)

The appearance of mutations is a natural and expected event in the evolution of a virus. Since the initial genomic characterization of SARS-CoV-2, the virus has been divided into different genetic groups. Variants may increase transmissibility of the virus, increase its virulence, or decrease the effectiveness of public health and social measures, diagnostics, vaccines, and therapeutics. Much remains to be learned about these variants.

Number of countries/territories by VOC detected as of 27 December 2021



Source: GISAID.



Vaccination

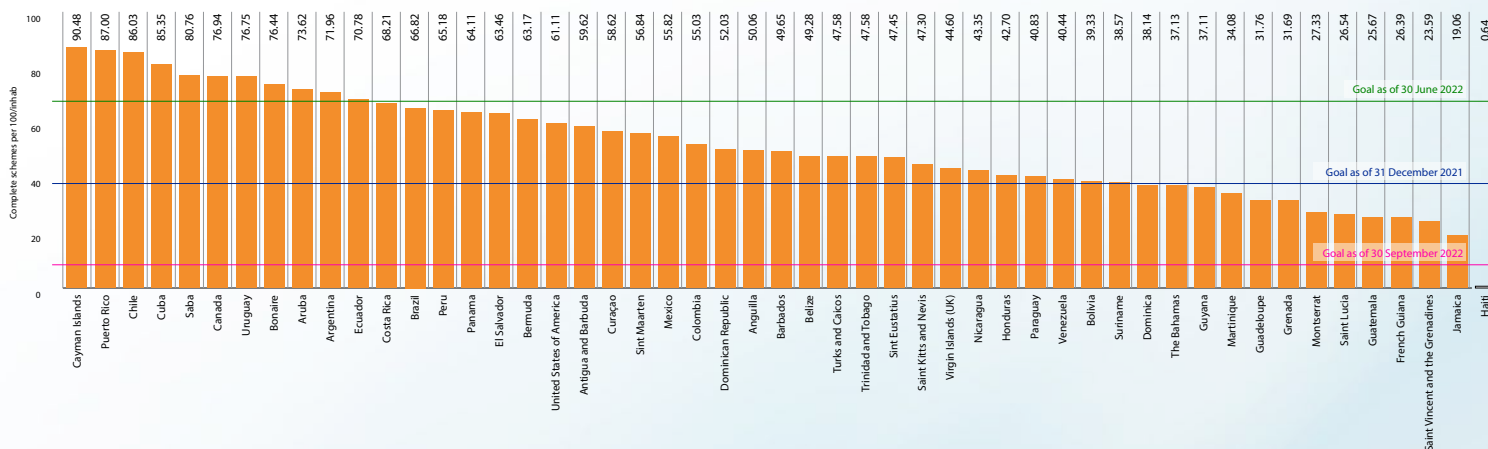
Global efforts to develop a safe and efficacious vaccine resulted in WHO’s approval of the first COVID-19 vaccine on 31 December 2020. Immediately afterwards, WHO included Vaccination Operations as the 10th pillar in its updated [Strategic Preparedness and Response Plan](#) (SPRP) for 2021. PAHO’s vaccination response to the COVID-19 pandemic is aligned with WHO’s SPRP 2021 and PAHO’s [Response to the COVID-19 Outbreak in the Region of the Americas: Response Strategy and Donor Appeal](#).

- Pfizer/BioNTech: Comirnaty
- Moderna: Spikevax
- Oxford/AstraZeneca: Vaxzevria
- Serum Institute of India: Covishield
- Janssen (Johnson & Johnson): Ad26.COV2.S
- Sinopharm (Beijing): Covilo
- Sinovac: CoronaVac
- Bharat Biotech: Covaxin
- Novavax: Nuvaxovid
- Serum Institute of India: COVOVAX

Within one year after the approval of the first COVID-19 vaccine, WHO granted [Emergency Use Listing \(EUL\) approval](#) to 10 COVID-19 vaccines (more information available on the SAGE [webpage](#)):

All countries and territories in the Region have begun vaccination operations. As of 31 December 2021, more than 1.45 billion COVID-19 vaccination doses had been administered and more than 623 million persons had

Fully vaccinated per 100 people in countries of the Americas, epidemiological EW 52, 2021



Source: COVID-19 Vaccination in the Americas dashboard. Available from: https://ais.paho.org/imm/IM_DosisAdmin-Vacunacion.asp



received at least two doses of COVID-19 vaccine. In Latin America and the Caribbean (LAC), about 59.4% of the population was fully vaccinated with two doses. The countries with the highest vaccination rates were Chile, Cuba, Canada, Uruguay, and Argentina.

By 27 December 2021, 36 of the 51 countries and territories in the Americas had reached the WHO global target for vaccination coverage of 40% (as set in the [WHO Strategy to Achieve Global Covid-19 Vaccination](#) by mid-2022). Eleven of these countries have already achieved the 70% vaccination target set for 30 June 2022. By the end of 2021, all countries except Haiti had expanded eligibility for COVID-19 vaccines to children and/or adolescents younger than 18. All countries,

except for Haiti and Venezuela, had introduced a policy of COVID-19 vaccine booster doses for multiple segments of the population.

Despite these advances, many countries continue to struggle. Aside from Guatemala, all countries with below target coverage are in the Caribbean subregion. Haiti reported vaccination coverage below 10%.

Reasons for this low coverage include limited human resources to administer COVID-19 vaccines and limited antigens for the routine immunization program; limited cold chain equipment, which hampers the extension of the cold chain to all areas of a country; and reticence toward the COVID-19 vaccine.





**PAHO's Regional
Response to COVID-19**





Pillar 1. Country-level Coordination, Planning, and Monitoring

Support activation and operation of national public health emergency management mechanisms, as well as COVID-19 planning and response, based on a whole-of-government and inclusive whole-of-society approach.

Pillar 1 of the response to the global COVID-19 pandemic calls for the activation of national public health emergency management mechanisms and the engagement of all relevant ministries (including health, education, travel and tourism, public works, environment, social protection, and agriculture) to provide coordinated management.

The PAHO/WHO regional Incident Management Support Team (IMST), activated in January 2020, and Incident Management Teams (IMTs) in all PAHO/WHO Country Offices were established to spearhead the Organization's technical cooperation for the pandemic. This cooperation is structured around three areas of response:

■ Epidemic Intelligence

Ensuring surveillance systems are in place to detect cases of COVID-19; people have access to timely and accurate testing; and decisionmakers have the analyses needed to formulate policies and strategies to stem the spread of the virus.

■ Public Health Measures

Guiding Member States to reduce the number of infections through public health and travel-related measures that lessen the likelihood of infection, while ensuring systems are in place to detect new cases coming from outside the country.

■ Strengthening Health Systems

Ensuring Member States are prepared to manage outbreaks of COVID-19 with adequate staffing levels, protected health workers, evidence-based treatment protocols, appropriate supplies, and good-quality equipment.

In the first quarter of 2021, the PAHO/WHO IMST and IMTs officially incorporated a fourth area into the COVID-19 response: vaccination. This area supports planning and readiness for vaccine procurement and deployment; regulatory and logistical issues; and evaluation of the vaccines, ensuring timely and equitable access and vaccine safety surveillance.

Regional Coordination

The Director of PAHO has provided guidance and support on strategic, technical, and financial issues to regional coordination mechanisms such as the Caribbean Community (CARICOM); the Forum for the Progress and Development of South America (PROSUR); the Central American Integration System (SICA); the Southern Common Market (MERCOSUR); the Organization of American States (OAS); and other regional multilateral organizations. The Organization has also convened regular meetings with ministries of health, including meetings of the Governing Bodies, to provide the most current evidence- and science-based advice and to seek consensus on regionwide approaches to tackling the pandemic.

In October 2021, PAHO and the Economic Commission for Latin America and the Caribbean (ECLAC) released a joint report urging governments in LAC to accelerate vaccination processes, transform health systems, and strengthen public investment to control the health crisis. PAHO's second joint report, [The prolongation of the health crisis and its impact on health, the economy and social development](#), provides an update on the evolution of the COVID-19 pandemic and its implications for health, society, and the economy. In the publication, PAHO and ECLAC demonstrate the urgent need to strengthen regional coordination and for integration mechanisms for international cooperation.

Selected Activated Mechanisms and Actions for PAHO's Response

More than **340** regional and national virtual trainings and webinars for health professionals across the Americas through December 2021.

197 evidence-informed public health guidelines developed, geared toward developing national strategies, policies, and protocols for an effective response to the pandemic.

184 regional-level technical staff mobilized and technical subgroups convened to provide support.

27 Country Offices established IMTs for rapid technical guidance and support to health authorities in LAC.

79 field missions to provide technical support and cooperation for strengthening country response.

2,084 bilateral communications between national focal points (under Article 44/IHR) on cases/contacts and travel-related issues.

28 COVID-19 operational situation reports on the regional and country response were produced biweekly and shared with internal and external stakeholders.

Supporting Multisectoral and National Response to COVID-19

PAHO's support is aligned with the global [Strategic Preparedness and Response Plan for COVID-19](#) (SPRP), originally published in February 2020 and last updated in February 2021. This plan outlines the support that WHO and the international community stand ready to provide to enable all countries to respond to COVID-19. WHO also issued updated [Operational Planning Guidance](#) to support the development of Country Preparedness and Response Plans for COVID-19. PAHO integrated the pillars from WHO's SPRP into its [Response Strategy and Donor Appeal](#), and [PAHO Resolution CD58.R9](#) approved by Member States.

PAHO also supported action reviews in selected Brazilian states and is in the process of adapting the methodology and tools prepared by WHO for Intra-Action Reviews.¹ As the epidemiological situation evolves, PAHO will work with relevant WHO Collaborating Centers² to support countries and territories in this process.

Public Investment in Health in Times of COVID-19

An unprecedented economic crisis threatens to roll back 10 years of progress in per capita regional income gains. One of PAHO's priorities for 2021 was to support the development of resilient health systems in the face of COVID-19, both to ensure the sustainability of the systems and to protect past public health achievements at the regional level. In July 2021, [PAHO launched a series of virtual seminars on "Public investment in health in times of COVID-19."](#) The [first webinar in the series](#) addressed the financial protection of health in the context of the global and regional pandemic. Subsequent webinars are still to be scheduled and will also serve to reflect on the role of health financing among the measures promoted by countries to inform the dialogue and advocacy for the strengthening of health systems.

1 Guidance for conducting a country COVID-19 Intra-Action Review. Available from: https://www.who.int/publications/i/item/WHO-2019-nCoV-Country_IAR-2020.1

2 Universidad del Desarrollo, Chile, WHO Collaborating Centre for the International Health Regulations (IHR); U.S. Centers for Disease Control and Prevention (CDC), United States of America, WHO Collaborating Center for Implementation of IHR Core Capacities; Johns Hopkins University, United States of America, WHO Collaborating Center for Global Health Security.



“The challenges that all our countries have faced in responding to COVID-19 are a consequence of persistent inequity and social injustice, long-term structural deficiencies in the health sector, years of inadequate attention and public investment in health, and lack of preparedness and leadership.”

Dr. Carissa F. Etienne, Director of PAHO

All 35 Member States continued to implement intersectoral COVID-19 response mechanisms, which involved the highest level of political leadership and included key sectors. PAHO liaised with in-country UN agencies to lead the health sector response and ensure that the UN system followed a holistic approach in tackling the pandemic and its repercussions.

One of these mechanisms has been the [COVID-19 Partners Platform](#), a collaborative online space to facilitate coordination and governance among countries, UN Country Teams, donors, and partners. The Platform, created in partnership with the UN Development Coordination Office, enables a streamlined response to COVID-19 in the Region. The Platform has provided the framework for planning and monitoring; served as a repository for response plans and assessments; allowed for standardized monitoring of plan implementation via an action checklist; and contains summaries of up-to-date technical guidance and resources. The Platform also has played a key role in vaccine delivery.

Guidance for Decisionmakers

Since the onset of the COVID-19 pandemic, most PAHO Member States have put in place diverse packages of community-wide non-pharmaceutical measures

to fight the pandemic. However, their introduction, adjustment, and discontinuation are not always anchored in evidence or based on granular and/or multisource data. These measures, including the use of masks, often lack a robust set of indicators to facilitate more predictable risk communication efforts and, possibly, increase adherence.

Throughout the pandemic, PAHO has provided periodic COVID-19 briefings for ministers of health in the Americas. However, during this period, health policy has moved beyond the health ministries to encompass the leadership exerted by heads of state and heads of government. In general, the response to the pandemic in the countries has been both holistic and agile, featuring strong centralized leadership; coordination across sectors and administrative levels; clear decision-making based on scientific advice; efforts to build the trust of the population; and, most importantly, the ability to change the course of action to confront the rapidly unfolding pandemic.

PAHO has published more than 197 evidence-informed guidelines and guidance documents geared toward an effective response to the COVID-19 pandemic. These resources are the result of extensive consultations with global and regional experts as well as exhaustive reviews of existing and emerging evidence. They



have facilitated the work of national governments and health authorities, allowing them to adapt the recommendations, protocols, and considerations to create national strategies, policies, and protocols. PAHO continuously reviews new and emerging information to build the evidence base used to combat the virus. Technical guidelines, scientific publications, and ongoing research protocols are available to the public on [PAHO's COVID-19 Technical Database](#).

Mobilizing Resources for the Americas

In April 2021, PAHO launched its updated Response Strategy and Donor Appeal, aimed at sustaining and scaling up its response to the COVID-19 pandemic to contain the spread of the virus and mitigate the longer-term health impact on the population of the Americas. The Appeal built on the knowledge acquired and lessons learned during the first year of the response to better tackle persistent and newly arising challenges and priorities at national, subnational, and regional levels, such as the need to mitigate risks related to new variants and the safe, equitable, and effective delivery of diagnostics and vaccines.



Between February 2020 and 31 December 2021, PAHO mobilized more than US\$379 million from strategic donors and partners, achieving 86.35% of the estimated funding requirements for priority public health needs of countries in the Region for 2020–2021.

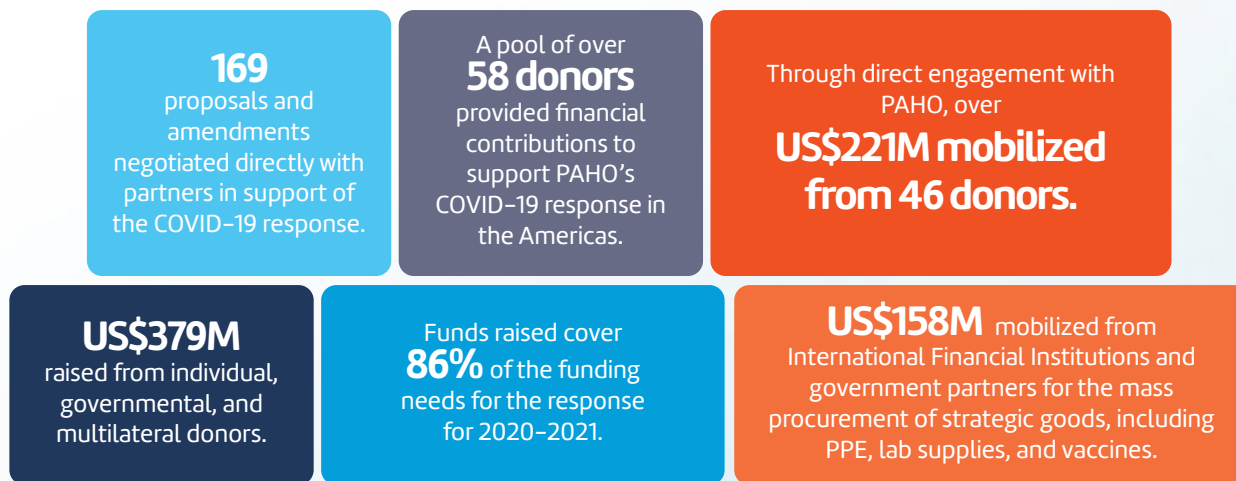
The Organization also received US\$158 million from international financial institutions and bilateral donors to support the procurement, on behalf of Member States, of essential supplies and equipment critical to the response, including PPE; laboratory tests, reagents, and equipment; clinical care supplies; and COVID-19 vaccines.

Increasing Preparedness Against Future Infectious Threats

The World Health Organization is tackling the problem of shortages of COVID-19 vaccines due to the limited number of global manufacturers that can supply the

necessary reagents and/or raw materials needed to manufacture mRNA vaccines. To help establish mRNA vaccine manufacturing capacity globally, WHO launched an initiative to support the transfer of technology necessary to produce mRNA vaccines in low- and middle-income countries (LMICs), ensuring that all WHO regions will be able to produce vaccines as an essential preparedness measure against future infectious threats.

Under this initiative, WHO and PAHO are working together to establish mRNA vaccine manufacturing capacities in LAC. In August 2021, PAHO launched the [Regional Platform to Advance the Manufacturing of COVID-19 Vaccines and other Health Technologies in Latin America and the Caribbean](#). The Platform supports collaboration across countries and cooperation agencies, applying existing regional biomanufacturing capacity to the production of COVID-19 vaccines and other medical technologies.



As of December 2021.

In October 2021, PAHO/WHO launched a call for expression of interest to manufacturers in the Region of the Americas that wish to become part of a regional consortium that will ensure that mRNA vaccines can be sourced in the Region—from raw materials to the finished product. Ideally, the group of manufacturers that comes together for this initiative will represent different geographical areas and work toward an integrated and sustainable regional value chain that will ease the dependence on vaccines from outside the Region. In the meantime, PAHO's Revolving Fund (RF) will continue to procure and distribute vaccines.

Information Management

PAHO provides regular reports on highlighted activities of the pandemic response by its Country Offices and the Incident Management Support Team (IMST) available in [PAHO's COVID-19 Operational Situation Reports](#). These reports, which are published biweekly, include information on the activities that contribute to WHO's Strategic Preparedness and Response Plan, including vaccination purchases, distribution, and deployment. Reports also include relevant figures related to response efforts in the Americas.

Thank You!

PAHO thanks our generous donors who have been helping us save lives and reduce the impact of COVID-19 in the Region.

Donor	Amount (USD)
Alma Jean Henry Charitable Trust	30,000
Belize	11,221
Canada	26,659,167
Caribbean Development Bank (CDB)	58,155
U.S. Centers for Disease Control and Prevention (CDC)	14,907,980
Central American Bank for Economic Integration (CABEI)	1,455,061
Colombia	500,000
Confederation of Caribbean Credit Unions (CCCU)	75,000
Corporación Andina de Fomento (CAF)	750,000
European Commission	10,832,569
Foundation for Innovative Diagnostics Initiative (FIND)	2,126,127
Foundation MAPFRE	52,358
Fundacion Yamuni Tabush	34,975
GAVI, the Vaccine Alliance	1,430,276
Global Fund	1,972,680
Inter-American Development Bank	19,285,428
International Organization for Migration (IOM)	200,000
Japan	2,727,272
Korea	4,806,061
Mixed Fund for Technical and Scientific Cooperation Mexico-Spain	359,336



Donor	Amount (USD)
National Voluntary Contributions	81,947,684
New Zealand	10,000
Other donors	50,000
PAHO Covid-19 Response Fund	95,326
Rockefeller Foundation	3,000,000
Sony Music Latin	87,316
Spain	407,000
Sweden	10,554
Switzerland	1,040,143
UN Agencies Consortium	311,496
UNICEF	1,435,637
United Kingdom	3,774,147
UNDCO	5,000
UNDP	2,711,069
UN Multi-Partner Trust Fund	2,917,160
UNOSSC	2,910,593
UNRCO	2,000
USAID	34,923,960
World Bank	4,982,365
World Food Program	3,564,988
WHO Foundation	83,561
Channeled through WHO	146,529,406
TOTAL	379,073,072

As of 31 December 2021.

Details on donations can be found on the [PAHO website](http://www.paho.org).

Stories from the field

South America:

With a campaign starring members of indigenous peoples, Ecuador promotes COVID-19 vaccination

Speaking in the Kichwa language, Anabel Motalvo, assistant director at the University of Otavalo, Ecuador, tells people: “Vaccination to counter COVID-19 is very good. The vaccine does not cause a reaction or, if it does, the reaction is not strong. It does not cause any disease. Come and get vaccinated, this vaccine helps us a lot.”



Anabel’s testimony is one of many that form part of a campaign by Ecuador’s Ministry of Public Health (MSP) to promote vaccination and guarantee equitable access to the COVID-19 vaccine for indigenous peoples and nationalities, Afro-Ecuadorians, and Montubios to reduce mortality and serious morbidity from this disease.

Based on a series of dialogues that collected the concerns of these communities about the COVID-19 vaccine, communication strategies were developed, which, states the MSP, respect the autonomy and knowledge systems of each community.

PAHO has provided support to the Ministry of Health of Ecuador to develop the COVID-19 National Deployment and Vaccination Plan. In addition, it has worked to develop operational guidelines for vaccination, with the objective

of guaranteeing inoculation of traditional communities in areas with difficult access to health facilities. PAHO has also developed communication and logistics strategies with the participation of community leaders.

María Andrango, an artisan merchant, also lent her voice and image to raise awareness about the importance of vaccination after getting vaccinated alongside her mother and grandmother. “I invite all families and seniors to approach the vaccine without fear because it does not cause us any harm.”

Misinformation and myths that circulate around vaccines have also been addressed. Bladimir Pizando, representing Kichwa youth in the province of Napo, states that “there is no proven anti-fertility effect from the vaccines,” and stresses that “the benefits of getting vaccinated reduce the risks of contracting a serious illness from COVID-19.”

After receiving the vaccine, midwife Rosa Patajala, from the community of San Jacinto-Colta, states that she is going to tell her community about her experience and that the vaccine was not painful. “Come all of you to get vaccinated,” Rosa invites, with her mask on and a smile in her eyes.

[Read more.](#)



Stories from the field

South America:

Awá youth receive training to become replicators of COVID-19 prevention messages in Colombia

Hailing from 32 indigenous reservations of the Awá peoples in Colombia, 80 young people and social leaders received training in public health, mental health, and prevention of COVID-19 to become multipliers of messages that seek to save lives during the pandemic. The initiative is part of the communication strategy, with an ethnic and cultural approach, carried out by PAHO in Colombia, in support of national and local authorities in the departments of Amazonas, Nariño, Chocó, and Magdalena.

In March 2021, when vaccination against COVID-19 began in Colombia, 127 traditional indigenous authorities, as well as the peoples who live in the Sierra Nevada de Santa Marta, publicly announced that they would not be vaccinated against the coronavirus. They asked that health authorities respect their decision not to be vaccinated, within the framework of their autonomy and self-determination. At the same time, they requested clear information so that the communities could freely decide whether or not they wish to be vaccinated.

To respond to this call, the Ministry of Health and Social Protection issued guidelines regarding the implementation of the national vaccination plan against COVID-19 for authorities and institutions responsible for education, communications, and health information aimed at the indigenous population, in a manner appropriate to the characteristics of these peoples, and in their own languages.

In Nariño, knowledge dialogues were held with the Awá and other indigenous peoples and actions were agreed upon, including two-way communication channels using telephone-based messaging apps; risk communication workshops for health authorities and indigenous leaders; radio campaigns in Spanish and Awapit on local stations; joint creation of audiovisual and print communications; and training for young people to serve as replicators of messages, produced using both local and scientific medical information about COVID-19 and vaccination, so that residents were able to make informed decisions.



Once in their communities, and over a two-month period, the 80 Awá youth and leaders carried out activities that included meetings, house-to-house visits, surveys, and the distribution of educational and informational materials on COVID-19 and vaccination. For their part, Nariño's health authorities (IDSN) explained that indigenous health-providing institutions (IPS) would supply the vaccines needed to guarantee this right to those who autonomously wished to be vaccinated.

[Read more.](#)



Pillar 2. Risk Communication and Community Engagement

Support participatory development and implementation of risk communication plans and dissemination of risk communication information to populations and travelers.

The novel coronavirus outbreak posed extraordinary new challenges to populations and health authorities worldwide, both in terms of facing pandemic-related health issues as well as ensuring the dissemination of accurate, updated, and life-saving information. In 2020, coordinated actions across governments and society at large were key to managing the COVID-19 pandemic, amidst the infodemic¹ caused by the proliferation of large amounts of information, including misinformation, generated across print and broadcast media, social media, and mobile messaging apps.

As vaccines became available in 2021, PAHO's communications initiatives played a crucial role in incentivizing demand for the vaccine as well as in challenging or dispelling false information and rumors related to its effectiveness. This helped, to varying degrees, to contain the spread of the virus and prevent further loss of lives and reaffirmed the importance of risk communication and community engagement (RCCE) plans and materials in the national response to COVID-19, ensuring that all audiences received clear and accurate information in the language and through the channels most familiar to them.

Communicating to Build Trust in COVID-19 Vaccines

In the face of the infodemic surrounding COVID-19 vaccines, PAHO strengthened its approaches to risk communication and community engagement. The Organization continued to address misinformation, vaccine hesitancy, and fake news related to COVID-19 and to ensure the public could easily find accurate information. The Organization partnered with Twitter, Google, and Facebook to counter misinformation, carry out live events on Facebook and Twitter—"Ask the Experts," and facilitate communication with the public, with infographics available in English, Portuguese, Spanish, as well as Dutch, Haitian, Creole, and indigenous languages in many cases.

The Organization also developed a [website dedicated to COVID-19 vaccination](#) that is continuously updated with information and resources that target a variety of audiences. This has enabled Member States to strengthen community engagement and generate demand for COVID-19 vaccination.

¹ According to the World Health Organization, an infodemic is too much information, including false or misleading information in digital and physical environments, during a disease outbreak. It causes confusion and risk-taking behaviors that can harm health. It also leads to mistrust in health authorities and undermines the public health response. An infodemic can intensify or lengthen outbreaks when people are unsure about what they need to do to protect their health and the health of people around them. With growing digitization—an expansion of social media and internet use—information can spread more rapidly. This can help to more quickly fill information voids but can also amplify harmful messages.



Selected communications material shared through PAHO's social media





Facebook

Through an agreement with the World Health Organization, Facebook allowed PAHO to place COVID-19 public health messaging ads at no cost to the Organization. These ads—with advice on a wide variety of COVID-19 health issues—engaged the general public and public health officials and creatives throughout the Region and beyond. Through August 2021, the monetary value of Facebook’s in-kind support to PAHO, in the form of free ad placement on the Facebook platform, was estimated at approximately US\$5 million. PAHO’s increased dissemination of COVID-19 vaccination material and non-COVID-19 public health information has had a significant impact: impressions reached 8.4 billion (or the total number of times the content has been shown to social media browsers) and its reach to unique users exceeds 634 million people.

Twitter Latin America

Since the onset of the pandemic, Twitter Latin America has had an agreement with PAHO through which it donated advertising credits for PAHO to use on COVID-19 posts. As of August 2021, PAHO has received US\$42,000 in advertising credits. Twitter Latin America has also provided training opportunities and a dedicated customer service representative to answer technical questions. PAHO staff participated in training sessions, including one on crisis response communications.

Sony Music Latin

PAHO continued collaborative campaigns with Global Citizen and Sony Music Latin recording artists to inform and educate people in the Americas about the spread of COVID-19. “Color Esperanza 2021: Protect Yourself and Protect Others” features five Latin artists, including Diego Torres—who co-wrote and performed the song, which translates in English as “Color of Hope”—along with Kany García, Leslie Grace, Thalía, and Carlos Vives. The 2021 campaign prioritized prevention—mask-wearing, social distancing, handwashing, and staying home—and addressed important mental health issues. Originally launched in May of 2020, the initiative pledged the donation of all royalties received by the record company from the “Color Esperanza” track, in perpetuity, to support PAHO’s response to the pandemic, including the procurement of PPE, COVID-19 tests, and critical care equipment for countries like Belize, Bolivia, Guatemala, Haiti, Honduras, Nicaragua, Paraguay, and Suriname. Funding from the campaign also helped PAHO respond to emerging health needs by ensuring essential frontline health care workers are kept safe; sustaining and scaling up key surveillance efforts to ensure timely detection of cases and better understanding of the changing patterns of the virus; and supporting local health care delivery to save lives.

Fostering Engagement with Civil Society

From April to December 2021, PAHO worked in collaboration with civil society actors in the Americas to strengthen community participation and the outreach of its COVID-19 response activities, and to mitigate the impacts of the pandemic and other emergencies in vulnerable populations. These efforts targeted marginalized groups and populations in situations of vulnerability, including persons with disabilities; informal domestic workers; young adults and adolescents; and women and indigenous communities.



Activities were part of a WHO global pilot initiative, funded by the COVID-19 Solidarity Response Fund, that aimed to streamline and scale up the involvement of civil society and communities as equal and integral partners to the national pandemic responses and recovery, following a “whole-of-society” approach to the COVID-19 response. **This global initiative, which supported 54 CSOs in 40 countries worldwide,**

had a direct and indirect impact on approximately 80 million people living in different situations of vulnerability. This effort was WHO’s first large-scale global initiative in directly investing financial resources in CSO partners to create enabling environments that empower communities and build resilience to emergencies. **In the Region of the Americas, PAHO collaborated with seven CSOs in four countries in Central and South America and the Caribbean – Ecuador; Guyana; Panama; and Guatemala.**

This initiative showed how small investments in CSOs and community-based organizations can have a meaningful and positive impact on communities. In Ecuador, partnerships with two indigenous CSOs were established to implement culturally appropriate risk communications activities and community-based and gender-focused interventions to empower indigenous community-health workers as local “agents of change.” In Guyana, PAHO worked with two youth-oriented organizations to educate vulnerable groups, mainly adolescents, about preventative and control measures against the spread of COVID-19, support access to essential sexual and reproductive health services, as well as mold young leaders as voices and advocates within their communities to further disseminate protective and healthy practices. Panama’s collaboration with a trade union provided informal domestic female workers with accurate information around COVID-19 and enhanced intersectoral efforts to improve their access to mental health and psychosocial support and health care coverage, therefore improving their quality of life, including their families and communities. Finally, in Guatemala, the Organization leveraged its convening power with national health authorities to strengthen the participation of civil society organizations representing persons with disabilities in the definition of inclusive humanitarian response plans and the development of inclusive health emergency risk management strategies.





Risk Communication and Community Engagement to Address Hesitancy and Misinformation

Misinformation about COVID-19 vaccines has compelled countries to reinforce risk communication and community engagement approaches. Partnerships with the media are critical for effective communication. Similarly, if countries are to respond to and overcome vaccine hesitancy, it is important to listen to and understand the concerns and doubts people may have regarding immunization. For these reasons, PAHO uses social media as part of its social listening activities, dedicating time to answering individuals' questions and developing social media materials that respond to broader uncertainties. A [webpage](#) with frequently asked questions on COVID-19 vaccination was developed and is constantly updated with responses to questions received from countries and the media, through social media, and from other sources. This information is translated into PAHO's four official languages.

PAHO developed tools and resources to help countries develop and implement risk communication and crisis communication plans to combat misinformation, particularly related to COVID-19 vaccines. In addition, PAHO: a) gathered data on the behavioral and social drivers of COVID-19 vaccination; b) developed courses on communicating about vaccine safety; c) hosted training on generating demand for vaccines; and d) developed campaign materials.

In March 2021, PAHO conducted a survey on [COVID-19 vaccine hesitancy among health care workers](#) (HCW) in 14 Caribbean countries to inform the development and implementation of strategies to reduce vaccine hesitancy and promote advocacy for vaccination among this priority group. Early results showed

that of 848 participants, 195 (23%) respondents displayed some level of vaccine hesitancy. Across HCW categories, 15% of physicians disagreed with getting a COVID-19 vaccine as soon as possible, compared with 34% of nurses, 23% of public health professionals, and 38% of allied professionals.

Training and Capacity-Building Materials

From June 2020 through January 2021, PAHO held a [training series aimed at preparing Caribbean journalists and communicators](#) to provide informative, responsible, safe, and evidence-based coverage of the COVID-19 pandemic. PAHO also developed a suite of technical and communication materials that addresses mental health and psychosocial support during COVID-19. Geared to the general population and vulnerable groups, including frontline and health workers, these materials were used in training and capacity-building virtual courses and more than 60 webinars.

In February 2021, PAHO released the [Guide for the preparation of a risk communication strategy for COVID-19 vaccines: A Resource for the countries of the Americas](#). Its goal was to help strengthen the communication and planning capacities of ministries of health and other agencies charged with communicating about new COVID-19 vaccines in the Americas.

In June, PAHO hosted a Spanish-language [webinar for the exchange of experiences on risk communication and community engagement in the context of COVID-19](#). Specialists from Chile, Cuba, and Honduras described the actions carried out, the tools used, and the lessons learned to aid other health communicators facing similar situations.

From September to December 2021, PAHO and [Chequeado](#), the Argentinian journalism fact-checking alliance, hosted a series of 12 workshops that trained 45 regional journalists to improve their reporting on COVID-19 vaccines and strengthen their ability to identify and correct misinformation surrounding the vaccines.

In November 2021 PAHO released the [Guide on risk communication and community engagement for contact tracing in the Americas](#). This technical guide was presented in a two-session webinar, in which more than 120 communicators and health promotion professionals participated. The PAHO Country Offices in Bolivia and Colombia presented the results of national projects on RCCE and contact tracing and the International Federation of the Red Cross (IFRC) introduced the 11 principles for community engagement and contact tracing.

Reporting on Mental Health during COVID-19

Together with the Caribbean Development Bank (CDB), and in collaboration with the Caribbean Broadcasting Union (CBU), [PAHO hosted a virtual training series on ethical reporting during the pandemic](#). One objective of the four-part series was to help communicators provide informative, responsible, safe, and evidence-based coverage of the COVID-19 pandemic, despite the proliferation of false information. Sessions addressed topics such as epidemiological and ethical concepts for reporting on COVID-19; mental health and psychosocial aspects and tips for self-care; how to ensure accurate and sensitive reporting on a pandemic; and the role of journalists in addressing COVID-19 stigma and mental health. Following the training series, participants were invited to enter the PAHO/CDB/CBU Awards “Celebrating Responsible

Coverage of Mental Health and Psychosocial Support During COVID-19,” giving them the opportunity to demonstrate their ability to cover the pandemic responsibly, using evidence-based information. Click here to read the winning article [“Mental health professionals voice looming concerns for Cayman teens.”](#)

Facilitating Online Training on COVID-19

The [Virtual Campus for Public Health](#) (VCPH) is PAHO’s official learning platform, which aims to contribute to the development of the skills and competencies of health workers, while supporting the transformation of public health services and practices in the Region. The VCPH is a decentralized network of people, institutions, and organizations that share courses and open educational resources about topics related to public health. COVID-19 courses are available on the VCPH in multiple languages.

The VCPH hosts **27** online WHO courses on COVID-19 topics, including infection prevention and control, vaccination, and public health leadership during the pandemic.

Courses are in Dutch, English, French, Portuguese, and Spanish.

Used by **37** countries and territories in the Americas.

More than **1 million** people enrolled in courses on topics related to COVID-19.

11 capacity-building webinars are available on the Caribbean Node of the VCPH to broadcast key messages in the subregion.



[OpenWHO](#), WHO’s interactive, web-based, knowledge-transfer platform, launched a series of online courses titled “[Serving Countries](#),” which provides countries with easy access to courses in their official languages to support their response to the ongoing COVID-19 emergency and other health threats. The course series for Suriname was launched on 11 June. The courses, developed in collaboration with the PAHO/WHO Country Office and the Ministry of Health, provided countries with educational materials in their official languages to support their response to the pandemic and other health threats while empowering frontline health professionals, policymakers, and the public.

Communicating with the Public

During [weekly press briefings](#), PAHO’s Director, Dr. Carissa F. Etienne, continuously reinforced the importance of maintaining strong public health control measures, such as testing and contact tracing, and evidence-based prevention mechanisms (social distancing, limiting gatherings, and promoting mask wearing). She addressed the rise in cases and severe illness among young people in many countries and discussed the stress health facilities were facing, with rising numbers of hospitalizations that were placing an overwhelming burden on oxygen supplies and the already limited number of health workers in the Region.

She also focused on the need to take steps to respond to the variants of concern as these were detected across the globe, including in this Region. She noted that widespread collaboration across the Americas is essential so that information can be disseminated and shared, and that responses can be tailored appropriately. She highlighted the importance of targeting misinformation that fuels vaccine hesitancy.

Dr. Etienne encouraged countries to formulate national vaccine deployment plans (NVDPs) to prioritize those at risk, such as health workers, older persons, and those with preexisting conditions, and highlighted PAHO’s work with countries to secure a sufficient number of vaccine doses to protect populations and plan for the vaccine rollout, building on the Region’s legacy of prior immunization campaigns.

44

weekly virtual press briefings by PAHO’s Director to inform and update the public, issue calls for action, and share recommendations on COVID-19.

500

More than social media materials in different formats and languages produced about COVID-19 (including public health and social measures and vaccines).

Facebook 
@PAHOWHO

Instagram 
@opspaho

Twitter 
@pahowho

LinkedIn 
Pan American
Health Organization



“It is when there are breakdowns in information and communication or when details are slow to arrive that misinformation can take root.”

Dr. Carissa F. Etienne, Director of PAHO

PAHO’s Director continued to advocate for advanced and priority vaccine distribution in the Americas, which was the epicenter of the pandemic for much of the last two years, and addressed the disparities in access to vaccines throughout the Region. She noted the importance of prioritizing investments in health in pursuit of equity, particularly given that COVID-19 has exacerbated poverty and inequity throughout the Americas.

PAHO partnered with SmartStudy, the global entertainment company behind the children’s brand, Pinkfong, to launch a [new public campaign](#) to encourage young children and their parents to protect themselves and others from COVID-19 by washing their hands often. The videos, in English, Portuguese, and Spanish, featured Baby Shark and other aquatic friends and used catchy lyrics to promote safe practices that help prevent the spread of the virus.





Pillar 3. Surveillance, Rapid Response Teams, and Case Investigation

Strengthen the capacity of surveillance systems to detect COVID-19 cases, while ensuring continued surveillance of other diseases with the potential to rise to epidemic or pandemic levels.

An essential part of PAHO's response has been the support the Organization has provided to countries in the Region to strengthen their public health surveillance systems to detect COVID-19. Supporting efforts to boost event-based surveillance (EBS) and indicator-based surveillance (IBS) helped ensure that countries integrate COVID-19 into their routine severe acute respiratory illness/influenza-like illness (SARI/ILI) surveillance systems.

PAHO published regional updates (by epidemiological week) that detail trends in influenza and other respiratory viruses, including [SARS-CoV-2 surveillance indicators](#). Throughout the pandemic, PAHO continued to analyze SARS-CoV-2 trends in the Region, particularly through the collection of countries' COVID-19 line lists of nominal case data.

Seroprevalence studies have provided valuable data on how the virus has spread and evolved, from the onset of the pandemic to date. PAHO maintains [a dashboard containing seroprevalence studies in Latin America and the Caribbean](#). This dashboard includes information on individual studies ranging from the design of the study, to sampling methods and sample sizes, as well as other relevant information.

PAHO's epidemiological reports/alerts, which include COVID-19 trend analysis, have provided countries in the Region with critical information to guide health interventions. [Epidemiological updates](#) have been published regularly and analyze the emergence of SARS-CoV-2 variants. The Region of the Americas contributes to the generation of genomic sequencing data through the [Regional Network for Genomic Surveillance of COVID-19](#).



20 of 36
epidemiological alerts and updates issued between January 2021 and 31 December 2021 were related to COVID-19.



38 of 56
countries, territories, and areas in the Americas report weekly on surveillance indicators for SARS-CoV-2, influenza, and other respiratory viruses.



77% of COVID-19 cases and **55%** of deaths were captured for epidemiological analysis to better characterize the pandemic in the Region.

As of 31 December 2021.



Monitoring and Analytical Products

302 daily situation reports with regional and global COVID-19 numbers (between January and December 2021), both with cumulative and daily numbers; COVID-19 highlights from EBS; comparative trends in all 56 countries, territories, and areas.

26 trend presentations at weekly meetings for PAHO IHR focal points on behavior of the virus and what to expect; 26 COVID-19 briefing notes prepared for communications.

15 bi-weekly tri-border situation reports (border areas in Brazil, Colombia, Peru, and Venezuela); online dashboard updated with information on COVID-19 in border areas: incidence, testing, mortality, hospitalizations, and contextual gaps/challenges.

PAHO COVID-19 Dashboard

The [COVID-19 Epidemiological Dashboard](#) monitors the current situation of the COVID-19 pandemic in the Region. Monitoring and quantifying transmissibility over the course of the pandemic is essential to understanding the evolution of the virus, forecasting its impact, and evaluating and adjusting public health responses.

Information Management

Daily update and maintenance (including on the weekends) of COVID-19 cases and deaths for all 56 countries, territories, and areas.

Weekly update of available COVID-19 data on health care workers and multisystem inflammatory syndrome in children and adults (MIS-C/MIS-A).

Daily update and maintenance of COVID-19 database on variants of concern and variants of interest, shared weekly with global and regional partners.

Ongoing efforts to automatically update hospitalization and testing data.

Regional Geo-Hub

PAHO has also developed the [COVID-19 Geo-Hub](#), an information system for the Region of the Americas that includes dashboards and epidemiological data that the public can consult for daily updates to cumulative cases, deaths, cumulative incidence rates, new cases and deaths, and other epidemiological indicators, as reported by countries and territories.

Data are collected from all 56 countries, territories, and areas and from 791 states, departments, and provinces in the Americas. Between March 2020 and August 2021, subnational data were collected daily; beginning 1 September 2021, subnational data were collected weekly. To date, 322,837 records are in the subnational database and 37,800 records in the national database. These data are displayed in 52 COVID-19 Geo-Hubs that describe the COVID-19 epidemiological situation in the Region of the Americas.



Event-Based Surveillance (EBS)

The [Epidemic Intelligence from Open Sources \(EIOS\)](#) platform enables multiple communities of users to collaboratively assess and share information about outbreak events in real time, which enhances the capacity to conduct ongoing risk assessment at the regional, national, and subnational levels. To date, PAHO has supported the expansion of EIOS to six countries in the Region (during September–October 2021, Guatemala and Haiti became the 5th and 6th Member States to participate in the EIOS expansion) to enhance their capacity for event-based surveillance of COVID-19 and other emerging infectious diseases. PAHO began meeting with Guyana in 2021 to plan for its participation in the expanded EIOS. It also supported the implementation of the platform at the subnational level in Brazil, training 344 health professionals through 35 cohort training sessions. Discussions and a proposal for the implementation of the EIOS expansion at the subnational level in Argentina took place in 2021; the projected rollout is scheduled for 2022. Additionally, PAHO hosted a virtual booth during the 2021 EIOS Global Technical Meeting, where it joined Brazil's Ministry of Health to present experiences with the EIOS expansion at the subnational level.

5.1 million
reports related to COVID-19 were captured
in the EIOS in the Region in 2021.

Approximately **345,800** reports related to
COVID-19 were scanned in 2021, detecting
approximately 9,880 signals.¹
A total of 247 bulletins were disseminated in 2021.

Laboratory-Based Surveillance

Laboratory-based surveillance, necessary to monitor COVID-19 disease trends, relies on data produced in clinical and/or public health laboratories. To strengthen laboratory diagnostic capacity, PAHO supported countries and territories with data reviews, virtual trainings, troubleshooting sessions, and support to ensure the availability of validated tests and SARS-CoV-2 reference molecular assays.

PAHO continued to work closely with the Region's laboratories to prioritize samples for genomic sequencing. To date, 22 countries are participating in the [PAHO COVID-19 Genomic Surveillance Regional Network](#), with 23 reference sequencing laboratories in Brazil, Chile, Mexico, Panama, Trinidad and Tobago, and the United States of America.

Contact Tracing Knowledge Hub

[PAHO's Contact Tracing Knowledge Hub](#) was launched in May 2021 and offers multidisciplinary information on contact tracing for a variety of audiences, from policymakers to responders, researchers, educators, affected communities, and the public. This hub is a public platform for access to the best and most up-to-date resources available to support contact tracing programs and activities.

The hub is comprised of four sections: technical guidelines, communication material, digital tools, and training. There is also a library of courses/trainings and an e-library of all scientific articles published on COVID-19 contact tracing. An interactive dashboard provides key contract tracing indicators at the regional, subregional, and country level.

1. Event-based surveillance (EBS) is the organized approach to the detection and reporting of "signals," defined as information that may represent events of public health importance, often through channels outside of routine surveillance systems. Signals can be designed to detect patterns of disease, such as clusters of similar illness in a community.



“Surveillance has always been the eyes and ears to guide our COVID response as we navigated our pandemic peaks and as we continue to track emerging variants.”

Dr. Carissa F. Etienne, Director of PAHO

Go.Data

Digital contact tracing tools have been used in the Americas to enhance COVID-19 outbreak response. Go.Data, an outbreak investigation tool developed by WHO, continued to be used to facilitate field data collection, contact tracing, and transmission chain visualization. This has accelerated the capacity of countries to operationalize and tailor contact tracing operations.

To date, PAHO has trained 35 countries and territories in the Region, and these countries have proceeded to download and install Go.Data, either at the ministry of health level or at specific administrative levels. Of these 35 countries, 17 continue to use Go.Data.

PAHO will continue to provide training on an individual basis (by country) and will continue working to integrate Go.Data into national surveillance systems.

Capacity-Building

Beginning in April 2021, PAHO launched monthly roundtable sessions or discussion forums on contact tracing, in which a focus group of countries in the Region is invited to participate, share experiences, and discuss relevant topics. To date, two roundtable sessions have taken place. Attendees have reported that these sessions helped them understand existing knowledge gaps related to contact tracing and facilitated communication/discussion and dissemination of lessons learned between countries.





Pillar 4. Points of Entry, International Travel, and Transport

Support surveillance and risk communication activities at points of entry as well as implementation of appropriate public health measures.

PAHO has continuously supported countries to ensure that COVID-19 risk mitigation measures are in place, including advice for travelers on the self-monitoring of signs and symptoms; surveillance and case management at the point of entry and across borders; capacities and procedures for international contact tracing; and environmental controls and public health and social measures at points of entry and onboard conveyances.

As international travel began to resume, efforts focused on defining national COVID-19 risk-based policies, taking into account the provisions of the International Health Regulations, available scientific evidence, and the most cost-effective use of available resources. PAHO continued to monitor the range of international travel-related measures implemented by Member States, in particular those explicitly related to the emergence of SARS-CoV-2 variants of concern. The Organization published this information in its PAHO COVID-19 Daily Updates (initially daily and then weekly), as well on the WHO secure [Event Information Site for National IHR Focal Points](#), as part of the global weekly updates.

The COVID-19 IHR Emergency Committee met four times in 2021, on [14 January](#), [15 April](#), [14 July](#), and [22 October](#). Following these meetings, the Director-General of WHO issued temporary recommendations for States Parties related to international travel, revolving around (i) maintaining essential international travel; (ii) the non-introduction of proof of vaccination against COVID-19 as a condition for exiting or entering the territory of any given country; and (iii) the adoption of a risk-based approach while defining international travel-related measures. Similarly, the IHR Emergency Committee advised the WHO Secretariat to develop guidance documents regarding the risk-based approach for the adjustment of international travel-related measures, as well as the digitalization of international travel health documents. Additionally, the IHR Emergency Committee advised on the need to remain vigilant vis-à-vis emerging SARS-CoV-2 variants, focus COVID-19 vaccination strategies against COVID-19 on the most vulnerable, and base overall response strategies on evidence, with a view to strengthening health systems.



PAHO has contributed to the development of a number of WHO documents since January 2021. The Organization collaborated with WHO on [Policy considerations for implementing a risk-based approach to international travel in the context of COVID-19](#) and on [Technical considerations for implementing a risk-based approach to international travel in the context of COVID-19](#).

In addition, with the rollout of COVID-19 vaccines early in 2021, PAHO worked with WHO to publish the [Interim position paper: considerations regarding proof of COVID-19 vaccination for international travelers](#) and the [Interim guidance for developing a Smart Vaccination Certificate](#).

Non-pharmaceutical measures pertaining to international travel vary widely from country to country, whereas other risk mitigation measures, such as personal protection and social distancing,

are generally implemented at the community level across the Region. Nonetheless, in compliance with a 2020 [Resolution from PAHO's Directing Council on the COVID-19 pandemic](#), essential international travel has generally been maintained across the Americas through the promulgation of ad hoc legal provisions. However, international travel-related measures have had an impact on the deployment of experts, the shipment of samples for testing, and the procurement of supplies and equipment for testing, case management, and infection prevention and control.

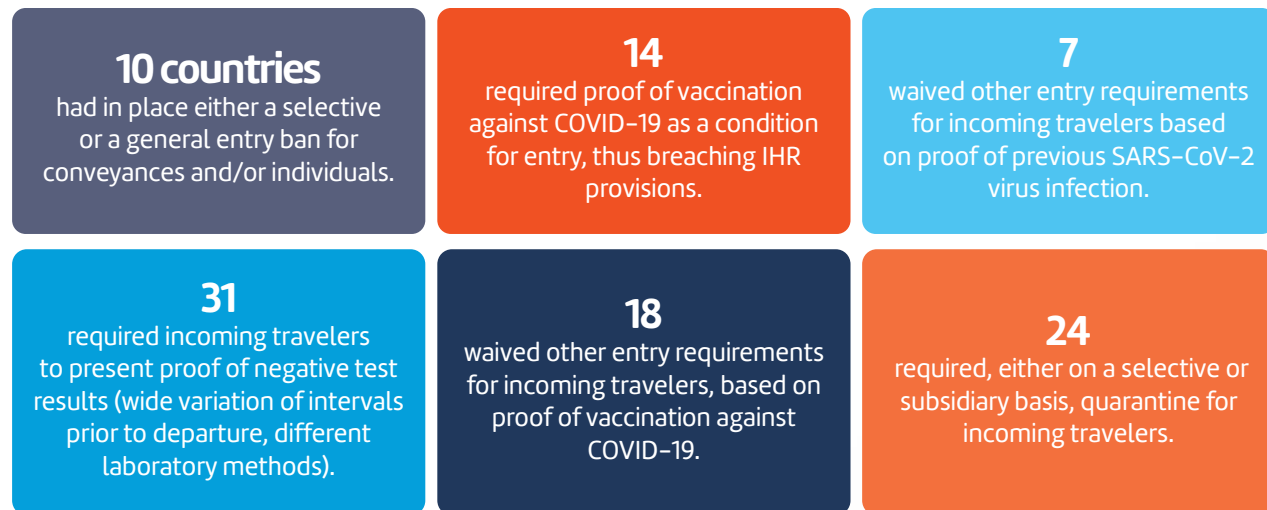
In an attempt to promote a risk-based approach to international travel-related measures in the Americas, PAHO worked closely at different levels with the two regional offices of the International Civil Aviation Organization (ICAO) in the Americas: the ICAO regional office for North America, Central America and the Caribbean and the ICAO regional office for South America.





Once non-essential international travel resumed, there were multiple and rapid changes to travel-related measures. However, the Region soon faced a new challenge with the introduction and spread of

SARS-CoV-2 variants of concern. In that context, the range of international travel-related measures put in place by PAHO's 35 Member States, according to government sources as of 6 January 2022, is as follows:



The adoption and implementation of community-wide social distancing measures in PAHO Member States has presented challenges, due to: (i) individual, societal, political, and economic fatigue; (ii) the emergence of SARS-CoV-2 variants with different rates of transmissibility; and (iii) the introduction of the vaccines, which, in certain contexts, has generated a false sense of security.

PAHO contributed to the development of the WHO document [Considerations for implementing and](#)

[adjusting public health and social measures in the context of COVID-19](#). With regard to public health and social measures in specific settings, such as schools, mass gatherings, and electoral processes, PAHO worked with the regional offices of international agencies, such as the United Nations Educational, Scientific and Cultural Organization; the United Nations Children's Fund (UNICEF); and regional sports-related bodies. The Organization also supported national institutional entities responsible for electoral activities.



Pillar 5. National Laboratories

Enhance laboratory capacity to detect COVID-19 cases as well as to manage large-scale testing for COVID-19 domestically or through regional networks and international reference laboratories.

Laboratory-based surveillance, necessary to monitor COVID-19 disease trends, relies on data produced in public health laboratories and/or clinical settings. In 2021, PAHO not only continued building diagnostic capacity to detect SARS-CoV-2 in the Region's National Influenza Centers (NICs) and in the SARI (Severe Acute Respiratory Infection) laboratory network, but also included wider health and laboratory systems. The Organization donated essential laboratory reagents and supplies for establishing or strengthening surveillance and confirmation of the virus.

When the pandemic started, the emergence of SARS-CoV-2 led to an unexpected surge in the global demand for laboratory supplies, causing product scarcity in the market and making it more difficult to maintain the supply chain for in vitro diagnostics (IVDs) using PCR, the reference diagnostic platform recommended by WHO.

Since the capacities established in Saint Kitts and Nevis in the first quarter of 2020, all 35 PAHO Member States have had molecular diagnostic testing capacity for SARS-CoV-2. The Region's public health laboratory network, including specialized referral laboratories, also has demonstrated expertise in the molecular

detection of respiratory viruses. PAHO disseminated a clear algorithm for testing for SARS-CoV-2 that has continued to build upon existing influenza surveillance systems and continued to provide guidance on testing strategies, quality assurance procedures, and genomic surveillance. The Organization developed and shared technical guidance on the interpretation of laboratory results for COVID-19 diagnosis; conducted technical training; followed up to provide troubleshooting and analysis of results; and conducted refresher training, as needed. In addition, to reduce the burden on laboratory systems, PAHO continued expanding diagnostic capacity through the use of antigen-based rapid detection tests (Ag-RDT) at different levels of care and in remote areas.

Variants of Concern (VOC)

In January 2021, PAHO published [Occurrence of variants of SARS-CoV-2 in the Americas](#), a preliminary technical report on detection of the two variants of interest (VOI) identified in the Americas at that time and associated with increased transmission in the United Kingdom (Alpha) and the Republic of South Africa (Beta). This document included PAHO's recommendations that Member States continue with the sequencing of samples, according to the guidelines



of the regional genomic surveillance network, and monitor sudden changes in the incidence of COVID-19 in light of public health measures and social distancing carried out by the population.

Subsequently, in late July 2021, PAHO published [Recommendations for reporting and notification of SARS-CoV-2 Variants of Concern \(VOC\) and Variants of Interest](#). These guidelines provided operational recommendations for reporting through the official channels of the International Health Regulations.

In December 2021, and in response to the emergency and introduction of a new Variant of Concern, PAHO published [Detection and diagnosis of SARS-CoV-2 in the context of the circulation of the Omicron variant of concern](#), with recommendations from the PAHO laboratory response team for the timely detection and reporting of this new highly transmissible variant.

At a meeting on the “Role of the National Public Health Laboratories in the SARS-CoV-2 Variants Detection and Surveillance,” organized by the Amazon Cooperation Treaty Organization (ACTO), the Organization presented the PAHO Genomic Surveillance Network to participating countries (Bolivia, Brazil, Colombia, Ecuador, Peru, Suriname, and Venezuela). The presentation was followed by discussions on next steps for collaboration in sequencing, focused on Amazon Shield countries.

PAHO participated in the webinar “Update on Scientific Knowledge about SARS-CoV-2: Effective Measures and New Variants,” organized by the Andean Health Organization (ORAS). The event reviewed current diagnostic methods and the situation regarding the SARS-CoV-2 variants. ORAS was created to provide a space for integration, developing coordinated actions to tackle common problems, and work with governments to guarantee the right to health. Its members are Bolivia, Chile, Colombia, Ecuador, and Venezuela.

In 2021, PAHO began a collaboration with the [Foundation for Innovative New Diagnostics \(FIND\)](#), a global alliance for diagnostics, with the goal of scaling up the use of SARS-CoV-2 Ag-RDTs in the Americas. PAHO also participated in the Genomic Working Group meetings, where the situation regarding VOC and VOI was reviewed. The Genomic Working Group is made up of experts from the Global Laboratory Alliance of High Threat Pathogens (GLAD-HP); WHO reference laboratories that provide confirmatory testing for COVID-19; the Global Outbreak Alert and Response Network (GOARN); temporary advisers; and members of the WHO COVID-19 Laboratory Team. Its purpose is to monitor the public health events associated with SARS-CoV-2 variants and provide technical advice and updates on information on genomic sequence techniques and results.

As of December 2021, 55 countries, territories, and areas in the Americas had detected at least one of the five variants of concern (Alpha, Beta, Gamma, Delta, and Omicron). A total of 54 countries, territories, and areas had detected Delta VOC and 42 had detected Omicron.



“The COVID-19 Genomic Surveillance Regional Network is an example of the power of Pan-Americanism and the importance of working together to control this virus. We must bring the same spirit of collaboration and solidarity to other dimensions of our COVID-19 response, especially vaccines.”

Dr. Carissa F. Etienne, Director of PAHO

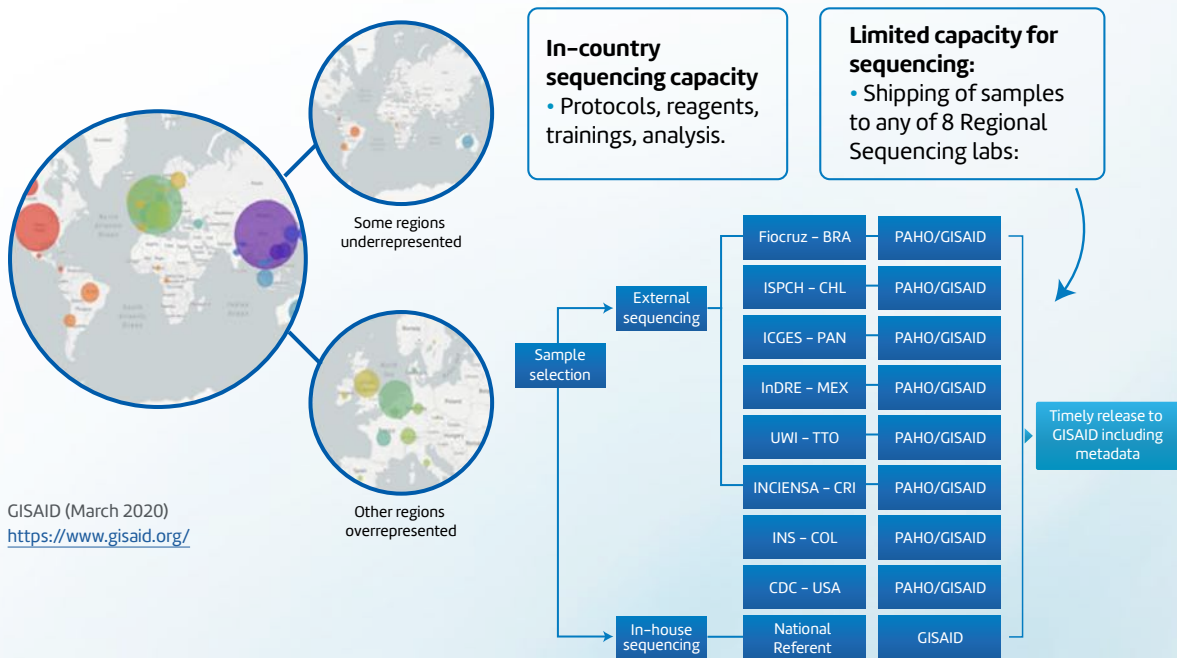
Regional Genomic Surveillance Network

Coordinated by PAHO and originally comprised of laboratories from 24 countries in the Region, the [COVID-19 Genomic Surveillance Regional Network \(COVIGEN\)](#) was created in 2020 to monitor the virus that causes COVID-19 and to detect any change in its sequence that may influence its ability to spread and

increase disease severity, as well as to monitor vaccine effectiveness, treatments, diagnostics, or other public health and social measures. As of December 2021, the Regional Network included 30 laboratories from 28 countries.¹

COVID-19 Genomic Surveillance Regional Network

Strengthens countries’ capacity for sequencing and genomic surveillance of SARS-CoV-2 in the Americas



GISAID (March 2020)
<https://www.gisaid.org/>

¹ Argentina, The Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay, USA, Venezuela.



Genomic surveillance network

PAHO coordinates the COVID-19 Genomic Surveillance Regional Network, with **30 laboratories** from **28 countries**.

Approximately **205,700** full genome sequences of SARS-CoV-2 have been uploaded to the Global Initiative on Sharing All Influenza Data (GISAID) platform in 2021.

The first virtual meeting of the Covid-19 Genomic Surveillance Regional Network in April 2021 hosted **295 participants** from **30 countries and territories**, including Singapore, South Africa, Spain, and Switzerland.

As part of genomic surveillance and to complement the sequencing, PAHO worked to implement molecular (PCR-based) screening protocols for early detection of VOC. These protocols were developed by Fiocruz-Amazonas in Brazil and have been successfully applied in at least 24 countries.

The rapid procurement and deployment of materials (primers, probes, positive controls, enzymes, etc.); in-house reagents from WHO/PAHO Collaborating Centers; and Ag-RDTs, in stock either at PAHO HQ or at the warehouse in Panama, contributed to enhancing laboratory capacity to detect COVID-19.

In July 2021, the Organization held a training course on the CDC's Influenza/SARS-CoV-2 Multiplex Assay, with 142 participants from 29 countries and territories. In December 2021, PAHO held the PAHO-GISAID International Training Course on Influenza and SARS-CoV-2 Bioinformatics, with 121 participants from 26 countries and territories.

Overall, in 2021, PAHO conducted training sessions, through webinars and virtual events, in at least 17 countries, aimed at building and strengthening the capacity of national laboratories throughout the Region. Additional data review, troubleshooting sessions, and follow-up calls regarding laboratory diagnostics were held (more than one session) with 29 countries.



Pillar 6. Infection Prevention and Control and Protection of the Health Workforce

Support efforts to reduce human-to-human transmission within health facilities and the community, including assessment of national IPC plans.

35 Member States

reported having a national IPC program and WASH standards in health facilities.

220 IPC

sessions held in 2020–2021.

20,829

persons trained, including logisticians, hospitality workers, and others at higher risk of exposure.

2,944

health professionals trained in 2021.

Infection prevention and control (IPC) is critical to containing the spread of emerging and re-emerging pathogens in health care facilities and community settings. Since the onset of the COVID-19 pandemic, PAHO has worked closely with health authorities to reiterate the need for consistent and robust IPC programs and practices, such as taking standard precautions; hand hygiene while providing care; the rational use of PPE; cleaning and disinfection of medical devices; and water, sanitation, and hygiene (WASH) in health facilities and the community.

PAHO has conducted technical activities directed at IPC and developed and implemented education and

training programs in Member States. The Organization has also partnered with the Council of Ministers of Health of Central America and the Dominican Republic (COMISCA) to support the development of an IPC training program for Central America, which was delivered to 52 participants from Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua from November 2021 through January 2022.

In March 2021, the Organization designed a [self-assessment tool for acute health care facilities](#) to identify, prioritize, and address the gaps in infection prevention and control capacity while managing the response to COVID-19.

From January to December 2021, PAHO also worked in collaboration with The Bahamas, Belize, and Guatemala to assess IPC programs and practices at national and subnational levels and in health facilities. The results were shared with the Member States, with recommendations based on minimum requirements for the specific level of health care facilities – primary, secondary, or tertiary. In Guatemala, PAHO supported the elaboration of a national guideline for the reprocessing of medical devices, which had been identified as an infection control gap at the facility level.



■ **The Bahamas**

Assessment at the national level and in 60 health facilities.

■ **Guatemala**

Assessments in five health facilities.

■ **Belize**

Assessment at the national level and in six health facilities.

(management of dead bodies, rational use of PPE, management of health workers exposed to COVID-19, and cleaning and disinfection of the environment).

Highlighted IPC sessions and number of participants

Virtual session	Number of participants
IPC sessions Antigua and Barbuda	74
IPC sessions Grenada	30
IPC sessions Saint Kitts and Nevis	268
IPC training Colombia	50
IPC training Dominica	236
IPC training Grenada	45
IPC training Haiti	370
IPC training Jamaica	45
IPC training other Eastern Caribbean countries	321
IPC assessment meeting The Bahamas	78
Total	1,517

Health Workers

Health workers are on the front line of COVID-19 response, providing care for suspected and confirmed COVID-19 patients, at great personal risk to their own health. In 2020, PAHO issued guidelines on care for health workers exposed to COVID-19 in health facilities, and in 2021, continued to aid countries by carrying out in-person and virtual training sessions on IPC within the ministries of health and with health workers.

During this period, general IPC training was provided to health workers from Colombia and Eastern Caribbean countries, including 12 sessions delivered to Antigua and Barbuda and Grenada, and additional trainings were conducted to meet specific needs of Member States, including: IPC practices in intensive care units in Antigua and Barbuda and Saint Kitts and Nevis, and for primary health care workers in The Bahamas, Dominica, and Jamaica.

PAHO provided a six-week training program for health care workers in Haiti on basic concepts of infection prevention and control, as well as four additional sessions on special topics related to IPC and COVID-19

- IPC sessions covered aspects related to the implementation of IPC in non-traditional settings, long-term care facilities, and health care settings, tailored to target groups such as maintenance workers, customs and borders officials, health care workers, and hospitality workers.
- IPC training was divided into two areas: basic IPC for HCW, covering standards and additional precautions, management of HCW with COVID 19, reprocessing of medical instruments, environmental cleaning, and disinfection; and advanced IPC training for IPC professionals, covering surveillance, outbreak investigation, and control, monitoring and evaluation of practices, and prevention of device-associated infections.

In March 2021, PAHO held a [regional meeting](#) with national IPC focal points to discuss challenges related to implementing IPC programs and practices in the context of COVID-19. A total of 114 delegates from 35 Member States attended the meeting, which covered many topics, such as advances in the organization and structure of IPC programs; the development and implementation of guidelines; education and training; surveillance of health care-associated infections; and monitoring, evaluation, and reporting of results. Discussions and an exchange of experiences continued in small working groups.

Rational Use of Personal Protective Equipment

Guidance on the best practices for the rational use of PPE is still crucial to ensure that supplies and often limited resources are most adequately and effectively used.

In 2021, PAHO continued to work with ministries of health to estimate needs for PPE, essential medicines, and other supplies, based on epidemiological trends and projections. The Organization supported the development of departmental intervention plans by training ministry personnel to calculate the quantity and volume of PPE needed to inform transportation and logistics concerns.

As Member States and territories continued to respond to the increasing number of cases of COVID-19, PAHO supported efforts to protect health workers by donating IPC equipment and supplies. Additionally, the Organization produced videos and posters to guide and promote the proper use of PPE in health facilities.



PAHO developed an [app offering health workers quick guidance on the adequate and rational use of PPE](#), based on the type of activity and professional role; medPPE is available on Google Play and for iPhone and was designed to help protect health workers (and avoid the misuse of essential PPE and supplies) as they care for patients with diseases transmitted by droplets and contact (such as COVID-19) or during procedures that generate aerosols. Since its launch in January 2021, and through December 2021, more than 3,100 users have downloaded the application.



Pillar 7. Case Management, Clinical Operations, and Therapeutics

Improve local health system capacity and protect health care workers to safely deliver equitable health care services.

The COVID-19 pandemic has challenged the delivery of health services in the Region. Patient care must be coordinated with and integrated into the primary, secondary, and tertiary care levels, while ensuring an uninterrupted supply of medicines and medical devices, including in remote areas. All Member States have taken significant steps to rapidly strengthen their health systems by increasing the availability of beds; providing essential supplies, equipment, and human resources to health facilities; and establishing Severe Acute Respiratory Infection (SARI) treatment units and respiratory clinics. In 2021, PAHO continued to provide technical guidance on case management and strategies to expand health services to meet these unprecedented needs.

PAHO also trained health workers in case management and therapeutics and worked with health authorities to adapt their recommendations and policy options on clinical management. The Organization collaborated closely with WHO and other global partners and stakeholders to advance clinical research, expand the knowledge base, and facilitate the exchange of experiences and expertise of frontline health providers. PAHO is working with Member States and partners to utilize the [WHO Global COVID-19 Clinical Data Platform](#) (Argentina, Brazil, Chile, Colombia, Dominican Republic, Mexico, Panama, Peru, and the

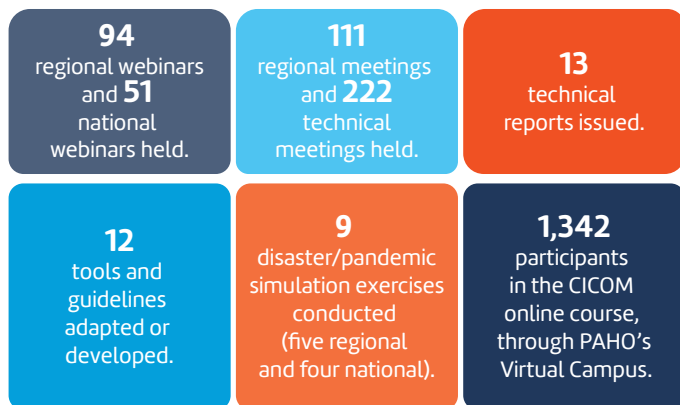
United States of America have contributed to the Clinical Data Platform), which collects anonymized clinical data on hospitalizations and suspected or confirmed COVID-19 cases.

Emergency Medical Teams (EMTs)

The Emergency Medical Team (EMT) initiative aims to enhance emergency preparedness and support the rapid and efficient deployment of national and international medical teams to provide coordinated, quality clinical care. This initiative looks to significantly reduce the loss of life and prevent long-term disability from disasters due to natural hazards, disease outbreaks, and other health emergencies.

During the COVID-19 response, PAHO has strengthened country capacity by providing technical assistance and training and developing guidelines. PAHO held the Regional Caribbean EMT coordination course in January 2021 to introduce the work of EMTs to the ministries of health and to coordinate the adoption of the CICOM (the Spanish acronym) methodology for setting up medical coordination and information cells as a key function of health emergency operations centers (EOCs). Experts from Antigua and Barbuda, Grenada, and Turks and Caicos helped deliver the course.

Strengthening Country EMT Capacity

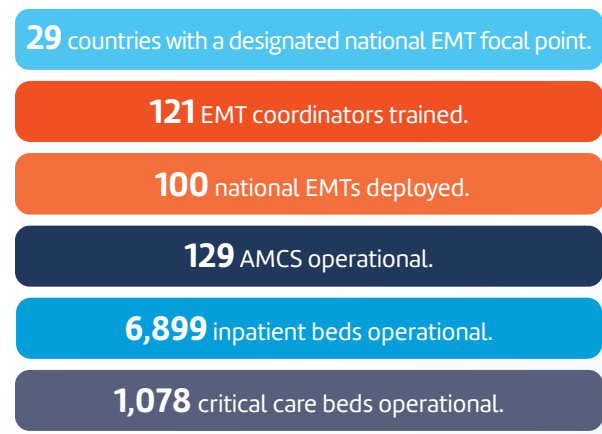


*As of 31 December 2021.
[Click here](#) for more information about PAHO's EMT response.

Building on previous recommendations for the deployment of EMTs and the selection and establishment of alternative medical care sites (AMCS), PAHO worked with its partners and the regional network of EMT focal points to coordinate local response and compliance with COVID-19 recommendations. Regional EMTs supported clinical care in border and remote areas, facilitating the access of migrants and indigenous populations. The Organization maintained updated information on deployed EMTs and AMCS regionwide through the COVID-19 EMT Response Hub. Through the EMT Ignite platform, PAHO fostered the dissemination of best practices and recommendations for consideration by EMT partners and health authorities.

As of December 2021, EMTs and pre-hospital emergency medical services were able to treat more than 600,000 patients for COVID-19 and other trauma and acute medical conditions since the pandemic unfolded. Although current regional EMT deployments now stand at around half the number necessary at the peak of deployments, as of 31 December 2021, 23 countries still reported 100 national EMTs currently

deployed, and 129 AMCS were operational, providing 6,899 inpatient beds and 1,078 critical care beds. Many EMTs have helped to set up temporary COVID-19 vaccination sites using existing structures. Since September 2020, PAHO has been mapping the EMTs participating in the response to COVID-19 in the Region, available on the [COVID-19 EMT response dashboard](#).



*As of December 2021.

During the COVID-19 pandemic, PAHO continued to strengthen its Member States' national response by developing guidelines and training on the establishment of EMTs; their rapid and efficient deployment; and the creation of AMCS. As of 31 December 2021, 29 countries in the Americas had a designated national EMT focal point. The roster of EMT coordinators comprised 121 trained individuals. WHO has classified seven EMTs in the Americas as an emergency medical team Type 1 provider, according to the global EMT standards, including International Medical Corps (IMC), which received this classification in May 2021. Another 20 teams were in the process of mentorship and classification and eight teams have expressed their interest in participating in the process.



Regulatory Considerations for COVID-19 Therapeutics, Supplies, and Equipment

National regulatory agencies (NRAs) ensure that robust mechanisms are in place to adapt to a rapidly changing environment as new products become available for prevention, treatment, diagnostics, and other COVID-19-related uses. PAHO convened all NRAs in the Region to establish a network of COVID-19 regulatory agencies; the focal points meet frequently to share information and recommendations, receive updates on topics such as approaches to issuing emergency use authorizations for medical devices, and discuss potential collaborations for the approval and oversight of new therapeutics. The Organization continued working with Member States to provide guidance on the use and other regulatory aspects of vaccines and in vitro diagnostics, based on authorizations such as the WHO Emergency Use Listing (EUL) procedures.

Health technology assessments (HTA) improve decision-making with regard to the incorporation of technologies into health systems. They also improve access and equity when distributing resources, especially in the context of the COVID-19 pandemic. The Regional Database of HTA Reports of the Americas (BRISA) provides open access to health technology assessment reports developed by the institutions of the Health Technology Assessment Network of the Americas (RedETSA). The COVID-19 section in BRISA currently has 334 reports on topics such as medicines, PPE, and medical devices.

PAHO has provided quality assurance, recommendations, and technical advice on medicines and medical devices that are to be donated or procured locally or regionally. Quality assurance consists of verifying eligibility criteria and conformity

with technical specifications; regulatory compliance; and required standards for health technology. PAHO's Oxygen Technical Group organized field missions to Dominica and Guyana, where situational diagnoses were conducted; assessments of oxygen production and local needs were carried out; and oxygen-related technologies were evaluated. In addition, PAHO facilitated communication between WHO and Member States to resolve quality deviations (identified by Member States) and temperature excursions related to COVID-19 vaccines.

Eligibility and technical criteria were developed for the procurement of sodium chloride, an injectable solution to support the deployment of the COVID-19 vaccine (Pfizer-BioNTech) in countries in the Region without a diluent supply.

PAHO and WHO presented information on the outcome of the WHO Emergency Use Listing Procedure (WHO/EUL) to NRAs, and enabled access to COVID-19 EUL vaccine dossiers by all NRAs that signed a confidentiality agreement with WHO.

Through weekly monitoring of 12 NRA websites, the Organization disseminated over 180 alerts pertaining to IVDs, PPE, ventilators, and other medical devices related to COVID-19.

PAHO developed and published [Recommendations on Regulatory Processes and Aspects related to the Introduction of Vaccines during the COVID-19 Pandemic and Other Emergencies](#). Through a consultation process that included 25 NRAs, recommendations were made to improve regulatory capacities related to the authorization, importation, lot release, and pharmacovigilance of COVID-19-related medicines.

To support national pharmacovigilance plans, PAHO provided countries with training, documents, and guidelines for passive and active surveillance. Weekly meetings were held with NRA focal points to exchange information and support decision-making regarding the management of adverse events following immunization. Additionally, 19 bulletins (in English and Spanish), with updates on COVID-19 vaccine safety, were produced and disseminated to the countries. PAHO developed a [web-based dashboard with information on the efficacy and safety of authorized COVID-19 vaccines](#). Seventeen countries¹ were trained and supported in the preparation of institutional development plans to strengthen regulatory capacities for the monitoring and control of medicines, as part of the vaccine deployment. Training also included the use of the computerized [Global Benchmarking Tools \(GBT\)](#), the primary means by which the World Health Organization objectively evaluates regulatory systems, which enables the self-assessment of national regulatory capacities.

Evidence Synthesis and Evidence-Informed Guidelines

The Organization developed evidence-informed guidance for the management of mild, moderate, severe, and critical care of patients with COVID-19, issued recommendations on the initial care of persons with acute respiratory illness due to COVID-19 in health facilities, and on the reorganization of services for patient management. PAHO also supported countries and territories in developing and implementing evidence-informed guidelines and policy options to manage and control the disease.

14 publications providing updated evidence on therapeutics (living reviews).

Evidence on **163** therapeutics synthesized from more than **483** randomized controlled trials.

6 guidelines on clinical management produced.

Ongoing Living Update of Potential COVID-19 Therapeutics Options: Summary of Evidence

The vast amount of data generated by clinical studies of potential therapeutic options for COVID-19 presents important challenges. New data must be interpreted quickly so that clinicians can make optimal treatment decisions with as little harm to patients as possible, and pharmaceutical manufacturers can rapidly scale up production and bolster their supply chains. Published in December 2021, the [30th edition of the database of evidence on potential therapeutic options for COVID-19](#) examines 171 therapeutic options. The information helps investigators, policymakers, and prescribers navigate the flood of relevant data to ensure that management of COVID-19, at both individual and population levels, is based on the best available knowledge. This resource will be continually updated as more research is released into the public domain.

¹ Argentina, Bolivia, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, and Venezuela.



Guidelines for Care of Critically Ill Adult Patients with COVID-19 in the Americas. Version 3

This publication, available in four languages, is the result of a rapid effort to develop guidelines. It provides more than 80 evidence-informed recommendations and good practice statements for the management of critically ill adult patients with COVID-19 being treated in ICUs in the Americas. The recommendations relate to identifying markers and mortality risk factors in critically ill patients, as well as infection control, sample collection, supportive care (respiratory and hemodynamic), pharmacological treatment, early rehabilitation, diagnostic imaging use, prevention of complications, and discharge requirements.

List of Essential Medicines for Management of Patients Admitted to Intensive Care Units with Suspected or Confirmed COVID-19 Diagnosis

The list of essential medicines required for the treatment of critically ill patients with suspected or confirmed COVID-19 in intensive care units was originally published in 2020 and updated during 2021, in line with PAHO guidelines on the topic, and published at the beginning of 2022 in [Spanish](#).

Guidelines for Prophylaxis and Management of Patients with Mild and Moderate COVID-19 in Latin America and the Caribbean

These clinical practice guidelines, published in October 2021, provide evidence-informed recommendations on prophylaxis for persons at risk of infection by

SARS-COV-2; identification of markers and risk factors for mortality in patients with mild or moderate COVID-19; screening for COVID-19; in-home care; the use of diagnostic imaging to guide management; drug treatment; the use of supplements; prophylactic anticoagulation; and criteria for follow-up and medical discharge. The recommendations are directed to all health personnel who care for patients in the emergency department and in primary care settings (general practitioners, specialists in emergency medicine, pulmonology, internal medicine, family medicine), as well as respiratory and physical therapists, nurses and pharmaceutical chemists, among others. The recommendations are also directed to decisionmakers and government entities involved in the management of COVID-19 patients. The publication is available in four languages.

Training and Capacity-Building

In 2021, PAHO organized a webinar series that covers topics related to the clinical management of COVID-19. The presentations reflect the latest evidence-based clinical practices and research in pharmaceuticals and other therapeutic interventions for the management of COVID-19. The target audience includes medical professionals, health workers, ministries of health, and PAHO Country Office focal points.

PAHO also launched a virtual course on Assessment, Selection, Rational Use, and Management of Health Technologies in the Context of COVID-19, tailored primarily to Caribbean health care workers. The course ran through June 2021 and health professionals from 14 countries participated.

In mid-2021, PAHO's Oxygen Technical Group co-organized and participated in the EMT Ignite webinar

series, with the presentation “Medicinal Oxygen: Sources of risks and mechanisms of action.” More than 100 persons participated. The Oxygen Technical Group, the Suriname Country Office, and technical staff from the Academisch Ziekenhuis Paramaribo Hospital met to review local capacities for the production and

demand for oxygen. The Technical Group also met with Peru’s Oxygen Technical Group to discuss priorities for technical cooperation. PAHO supported Guyana in the review of its national proposal to the Global Fund and face-to-face training. Virtual training was also provided to Haiti.

Clinical Management Webinars in 2021

Sessions	Date
COVID-19 Clinical Management: Update on Therapeutics	2 March
COVID-19 Clinical Management: Tocilizumab, recovery studies	16 March
Reducing Morbidity and Mortality in COVID-19 patients	15 April
Panel of Experts on the Experience in Clinical Management	6 May
Expert panel on the identification and management of clinical decompensation in COVID-19 patients	24 June
Managing Critical Care Units: One Year into the Pandemic	1 July
Financing and budgeting COVID-19 National Vaccination Plans: CVIC costing tool and coordination of technical cooperation to support deployment of vaccines	7 July
National COVID-19 Vaccination Plans Financing and Budgeting	8 July
Variants of Concern: Public Health, Clinical and Vaccine Implications	29 July
Clinical Management of Patients with COVID-19	7 September
Identification and Management of Post COVID-19 Complications	21 October
Launch of the Regional Report for the Americas “Second Round of the National Pulse Survey on Continuity of Essential Health Services During the COVID-19 Pandemic”	25 October
Clinical Management of COVID-19 patients - The Bahamas	9 November
Third round of the national Pulse survey on the continuity of essential health services during the COVID-19 Pandemic	11 November
Global WHO Evidence-to-Policy (E2P) Summit	15 November



Digital Platforms

Global understanding of the natural history of COVID-19, its clinical features, prognostic factors, and outcomes remains incomplete. In response, WHO created the [WHO Global Clinical Platform for COVID-19](#), a clinical platform of patient-level anonymized clinical data. PAHO supported the contribution of LAC countries to this secure, limited-access, password-protected platform, which currently contains data on over 400,000 cases. Argentina, Brazil, Chile, Colombia, Dominican Republic, Mexico, Panama, Peru, and the United States of America are major contributors from the Region.

The database on [COVID-19 Guidance and the Latest Research in the Americas](#) is a searchable platform comprised of guidelines and scientific papers

published by national authorities in the Region as well as PAHO and WHO technical documents. The database has proven to be an excellent resource for many health professionals, researchers, and decisionmakers. This continuing effort to catalog technical information from Member States using international metadata sets has increased the discoverability of COVID-19 guidance documents by the most-used Internet browsers.

[BIGG](#) is PAHO's international database of GRADE guidelines (Grading of Recommendations, Assessment, Development, and Evaluations). As of 31 December 2021, the database offers more than 1,470 guidelines in several languages, covering a wide range of health topics, including COVID-19. [Updated evidence on seroprevalence studies](#) from the Region has been summarized and is available.



Pillar 8. Operational Support, Logistics, and Supply Chain

Establish and implement expedited procedures to facilitate the Organization's support to the countries' and territories' response to COVID-19 health care services.

The protracted length of the pandemic and the recurring peaks in cases have posed a variety of challenges, both logistically, in terms of the availability of medical supplies, particularly PPE in 2020, and critically for case management and diagnostics. The travel restrictions and lockdowns imposed in response to the COVID-19 pandemic severely interrupted supply chains. This interruption was exacerbated by more stringent export controls and the lack of commercial flights, which PAHO relied on to deploy experts and ship medicines, supplies, and equipment. It was also necessary to continuously verify the quality of goods and supplies, as the market was flooded with products of dubious quality. While this situation has improved following the relaxing of measures by many countries, supply chain disruptions continue to represent challenges for ensuring the timely supply of supplies, equipment, and medicines.

231 shipments were sent.

35 Member States and territories received shipments.

396 tons of relief supplies were dispatched.

PAHO dispatched an average of **1** shipment every **36** hours.

Between January and December 2021, PAHO coordinated and dispatched more than 230 shipments in support of the COVID-19 emergency response.

337 tons of PPE shipped, including 3.11 million gloves; 6.2 million surgical masks; 818,848 respirators; 955,692 gowns; and 607,875 face shields.

49 tons of biomedical devices shipped to 31 Member States, including: 1,333 oxygen concentrators (with accessories); 1,445 portable handheld pulse oximeters; and 6,512 fingertip pulse oximeters.

110 shipments (59 tons) of laboratory supplies dispatched to Member States, including virus sampling kits, RDTs, primers, antigen tests, and swabs.

PAHO's Strategic Reserve in Panama allowed for quick mobilization of essential supplies, thus bridging the gaps between in-the-field needs and vendors' lead times, which have been much longer during the pandemic. Identifying mechanisms to replenish the Reserve's supplies has been critical to the continuity of strategic support during emergencies.

PAHO's Strategic Reserve is housed in the United Nations Humanitarian Response Depot (UNHRD).



Throughout the pandemic, PAHO’s team has prepared PPE kits and shipped them in a standardized manner for delivery. Each kit contains a sufficient supply of PPE (gloves, gowns, surgical masks, respirators, and face shields or goggles) to protect a number of ICU health care workers for 30 days. Packaging the kits in this standardized manner allows countries to quickly know the quantity of supplies received and how many hospitals can be served. This saves time and reduces logistical efforts once the kits are received and distributed. In total, more than 237 COVID-19 kits (PPE) had been dispatched as of December 2021.

PAHO COVID-19 Kit: 5x30 ¹	
Gloves	7,500
Masks	3,750
Respirators	150
Gowns	3,750
Goggles	150
Face Shields	450

Cross-functional coordination with technical units and pillar leads in PAHO’s Incident Management Support Team allowed for the timely shipment of supplies and effective planning between PAHO Country Offices and stakeholders, as well as with the World Food Program (WFP) and strategic partners such as Direct Relief.

From January to December 2021, Barbados (for onward shipping to the Caribbean), Haiti, Honduras, and Venezuela were the top four beneficiaries of all three categories of supplies (PPE, laboratory, and clinical management). In addition to the pandemic response, PAHO also supported emergencies such as the La Soufrière volcanic eruption in Saint Vincent and the Grenadines and the migrant situation in the border

area of Brazil and Colombia, as well as in Venezuela. The Organization additionally supported Member States with technical guidance and recommendations on quality assurance and post-market surveillance of items procured directly through national mechanisms.

During this same period, PAHO engaged in technical consultations with Member States related to local procurement and technical aspects of PAHO’s Strategic Fund (184 total, including on medical devices, PPE, and IVDs). Technical support was provided for regional procurement with quality assessment of medical devices (44) and PPE (40).

PAHO continued to collaborate with regional, national, and international partners (including other UN agencies) on all matters related to procurement, shipping, freight, logistics, and technical specifications for PPE, oxygen concentrators, in vitro diagnostics, and other goods, supplies, and equipment critical to the COVID-19 response.

Considering the multitude of suppliers and concerns about the quality of procured goods, supplies, and equipment, PAHO has made quality assurance a critical component of its technical support. This has entailed reviewing technical specifications for procured goods, ensuring correct shipping documentation for customs clearance, and supporting countries on quality assurance issues. WHO issued guidance on the rational use of PPE for COVID-19, as well as considerations during severe shortages. PAHO continued to advise Member States on current logistical challenges and the market situation regarding stocks of medical supplies and PPE.

1 5x30 kits include sufficient PPE supplies for the ICU staff of any given health facility to provide care to 5 patients for 30 days.



“We will intensify our efforts to ensure access to essential medicines and public health supplies through the Strategic Fund on behalf of our Member States to support the delivery of essential health services for all peoples in the Americas.”

Dr. Carissa F. Etienne, Director of PAHO

PAHO is the co-lead of the Regional Health Sector Group. The group works as a mechanism to improve health sector coordination during the response to emergencies. Humanitarian organizations work together to harmonize efforts, use available resources more efficiently, and create a cohesive response for the benefit of the affected population.

Through periodic and ad hoc meetings, the participating agencies share information regarding ongoing emergencies, action taken, challenges identified, and measures to improve operations. PAHO has organized three meetings with the representatives of 13 humanitarian agencies in the reporting period.





PAHO Strategic Fund for Essential Medicines and Strategic Fund Health Supplies

Established in 2000, the PAHO Strategic Fund is a regional technical cooperation mechanism for pooled procurement of essential medicines and strategic health supplies. It supports Member States by:

- Ensuring the quality, safety, and efficacy of medicines and other health products.
- Improving demand planning and capacity-strengthening for supply chain systems.
- Sustainably reducing prices of critical medications and supplies through a transparent international sourcing line of credit option to facilitate Member State procurement.

Throughout the pandemic, the Strategic Fund has rapidly assessed inventories of critical supplies across the Region to ensure there is an adequate stock of prioritized items. By leveraging close relationships with suppliers to better plan deliveries and shipments, as well as through existing long-term agreements to assure availability and mitigate price inflation, the Strategic Fund has expanded supply chain options that have provided Member States with needed flexibility.

The Strategic Fund has also coordinated alternative modes of transport (e.g., air freight vs. ocean freight) for the most cost-effective and timely methods of shipment, amid continuously evolving disruptions related to COVID-19. This has required direct negotiations with suppliers to absorb increases in freight costs for medicines.

Finally, given the need to adapt to the fluctuating availability of supplies during COVID-19, the Strategic Fund has worked with partners to support effective alternative treatment protocols. Since the start of the pandemic, the Strategic Fund has procured more than \$290 million worth of COVID-19 diagnostic tests (PCR and rapid tests), PPE, and medicines for critical care, supporting more than 38 million people in the Americas. The Fund also continues to support the procurement of medicines and public health supplies for individuals affected by HIV/AIDS, tuberculosis, malaria, diabetes, neglected tropical diseases, cardiovascular diseases, and hepatitis C.

Stories from the field

Caribbean:

Jamaican grandmother living with AIDS supports women's mental health during COVID-19



Meet Ivorine: 55, a Jamaican mother of three, grandmother to one, and living with HIV/AIDS for 29 years. A survivor of multiple opportunistic infections resulting from her health status, Ivorine has been an advocate for women living with HIV/AIDS for over two decades. Now, she has become a symbol of resilience in a community concerned about life during the COVID-19 pandemic.

Many of the women Ivorine knows, also HIV-positive, have lost their income, felt isolated, or needed motivation to continue taking their antiretroviral treatment. The pandemic increased the need for closeness in this community, where its members need specialized support, even as more women learn about their HIV-positive diagnosis and search for a safe place.

“Adjusting to life with a positive status is extremely difficult. With the pandemic came the heightened fear of contracting COVID-19 because of a compromised immune system and the added anxiety of discrimination if one becomes infected and needs medical care,” Ivorine shared. Spurred into action, she worked with the Jamaica

Community of Positive Women (JCW+) to transition their services to a virtual environment, helping to limit the number of women visiting the office for sessions.

PAHO supports HIV/AIDS programs in Jamaica and has supplied personal protective equipment (PPE) to various civil society organizations, including JCW+.

Though Ivorine’s journey involves delivering support to teens, the media, workplaces, and families of people living with HIV/AIDS, her most important work remains empowering women to embrace life after a positive HIV diagnosis, and now, reassuring them that COVID-19 is not a death sentence.

“My fear of COVID-19 meant that I didn’t want to go on the road to run errands or do anything. However, when I realized my peers were in a more difficult position than I was – many faced domestic abuse, lacked emotional support of family and friends – it spurred me to look beyond my personal fears and take action to help.”

[Read more.](#)

Stories from the field

North America:

The COVID-19 pandemic does not deter vaccination against measles and rubella in Mexico



Vaccination campaigns are part of the history of Mexico, and access to vaccines is a universal right. In 2021, Mexico launched its national measles and rubella vaccination campaign, targeting children aged 1 to 4. A call was made to mothers, fathers, guardians, and caregivers to take children to health clinics and other facilities to be vaccinated.

Planning for a vaccination campaign must begin one or two years in advance in order to acquire the necessary vaccines and supplies and tackle a wide variety of logistical issues. As planning began for this campaign, no one foresaw it would be carried out amidst a global pandemic. The COVID-19 pandemic posed great challenges for health personnel.



Nevertheless, strategies were put in place for the measles and rubella campaign to mobilize health brigades to the targeted localities, from the highest hill to the deepest ravines, to ensure that the vaccination program, which subsequently included measures to prevent COVID-19, reached as many people as possible. The entrances to supermarkets and shopping centers proved to attract the largest number of girls and boys aged 1 to 4 during the COVID-19 pandemic.

PAHO has provided technical support, followed up implementation at all stages, and facilitated funding, which have been fundamental to the success of this initiative.

Behind each campaign, there are many people and hours of work necessary to carry out these efforts. It is important to recognize the invaluable work of the health brigades, the nurses, and the health promoters, who do an excellent job every day to reach each of the homes.

[Read more.](#)





Pillar 9. Maintaining Essential Health Services during the Pandemic

Support continued operation of equitable health systems based on primary health care, to protect and sustain public health gains, investing in improved response capacity in the first level of care and the health service delivery networks, including the implementation of gender and culturally sensitive actions using human-rights based approaches, to overcome barriers to access, especially in populations in conditions of vulnerability.

The COVID-19 pandemic has created unparalleled stress on the health systems and services of countries in the Americas. Many countries find that they do not have sufficient health personnel, quality services, capacity, or supplies to manage the uptick in cases. At the same time, the priority given to managing the pandemic has interrupted routine health services and programs, including vaccination campaigns, malaria elimination, tuberculosis prevention and control, and the reduction of noncommunicable diseases (NCDs) and their risk factors. PAHO has prioritized the development of guidance and tools to inform countries about how to assess existing resources and formulate strategies to bridge identified gaps, without jeopardizing the fight against COVID-19.

This pandemic has demonstrated the critical need for universal health, showing that activation of the primary health care strategy and the use of all the resources of the health services network, including the first level of care, are essential to tackling the pandemic. Increased resolution capacity at the first level of care facilitates public access to health services and continuity of care at the community level.

The Organization has used epidemiological models to estimate needs for human and financial resources, as well as supplies and hospital beds. It has also supported countries in analyzing options for reorganizing and expanding hospital services and sharing experiences. Tools and guidance were developed to manage human resources for health, adapting the first level of care, and reorganizing different care levels to address the needs generated by the pandemic.

PAHO published [“Considerations for Strengthening the First Level of Care in the Management of the COVID-19 Pandemic”](#) in early 2021. It was launched during a webinar that attracted hundreds of participants from the Americas. This document presents considerations relating to the response capacity of the first level of care, seeking to ensure that every patient with a suspected or confirmed case of COVID-19 receives appropriate care at that level. It also provides guidance on how to facilitate the effective functioning of health services networks, including: the availability and training of human resources; the clinical management of suspected and confirmed cases; the distribution and availability of medicines, supplies, and medical devices; the implementation of digital health applications and information systems; and the availability of means for patient transfers.



Response to the COVID-19 pandemic requires health services to deliver patient care that is coordinated and integrated across the different levels of complexity, with availability of an uninterrupted supply of medicines and medical devices in all health care facilities, including in remote areas. Many countries and territories in the Region have been challenged when it comes to delivering health services under the current conditions, even though all have implemented measures to expand the capacities of health services networks to effectively manage COVID-19 patients.

Measures have included the expansion, redeployment, and training of human resources, procurement of essential commodities, budgetary allocations, and innovations in service delivery modalities. PAHO has provided ongoing tailored support to countries and territories to implement these measures, including the deployment of personnel and/or supplies. The Organization has provided technical guidance and training to all countries and territories, as needed, for the reorganization of health services and the expansion and strengthening of capacities to improve the response to COVID-19.

Guidance and Tools

In order to identify bottlenecks at the national, health facility, and community level that impact the management of COVID-19 and the continuity of essential services and community needs, PAHO has supported the WHO suite of health service capacity assessments in the context of the COVID-19 pandemic,

which includes three modules: 1) COVID-19 case management capacities in hospitals; 2) continuity of essential health services in first level of care settings; and 3) community needs, perceptions, and health care service demand. As of the last quarter of 2021, PAHO had worked with three countries in the Americas—Paraguay, Peru, and Suriname—to implement this set of tools, in close collaboration with health authorities. Country dashboards were developed to strengthen monitoring and access to and use of the data and information collected.

PAHO introduced the Essential Supplies Forecasting Tool (ESFT) to support countries in the Caribbean in estimating the expected resources needed to face the next three months of the pandemic. It was applied in Saint Lucia and is pending application in Antigua and Barbuda and Saint Vincent and the Grenadines.

Selected Events and Webinars

- Managing Critical Care Units: One Year into the Pandemic: 1 July.
- PAHO webinar: Financing and budgeting COVID-19 National Vaccination Plans: CVIC costing tool and coordination of technical cooperation to support deployment of vaccines: 7 July.
- National COVID-19 Vaccination Plans Financing and Budgeting: 8 July.
- Variants of Concern: Public Health, Clinical and Vaccine Implications: 29 July.
- Identification and Management of Post COVID-19 Complications: 21 October.



- [Launch of the Regional Report for the Americas “Second Round of the National Pulse Survey on Continuity of Essential Health Services During the COVID-19 Pandemic”](#): 25 October.
- Third round of the national Pulse survey on the continuity of essential health services during the COVID-19 Pandemic: 11 November.

The Global Fund

PAHO has coordinated with and guided 19 countries in the Region to generate and submit proposals to the [Global Fund’s COVID-19 Response Mechanism](#), in line with the needs defined in their national COVID-19 response plans. Known as C19RM, this mechanism supports countries to mitigate the impact of COVID-19 on programs to fight HIV, TB, and malaria and initiates urgent improvements in health and community systems. Based on the submitted proposals, the Region received US\$130 million; these funds are being allocated to health services response, laboratories, case management, and infection control.

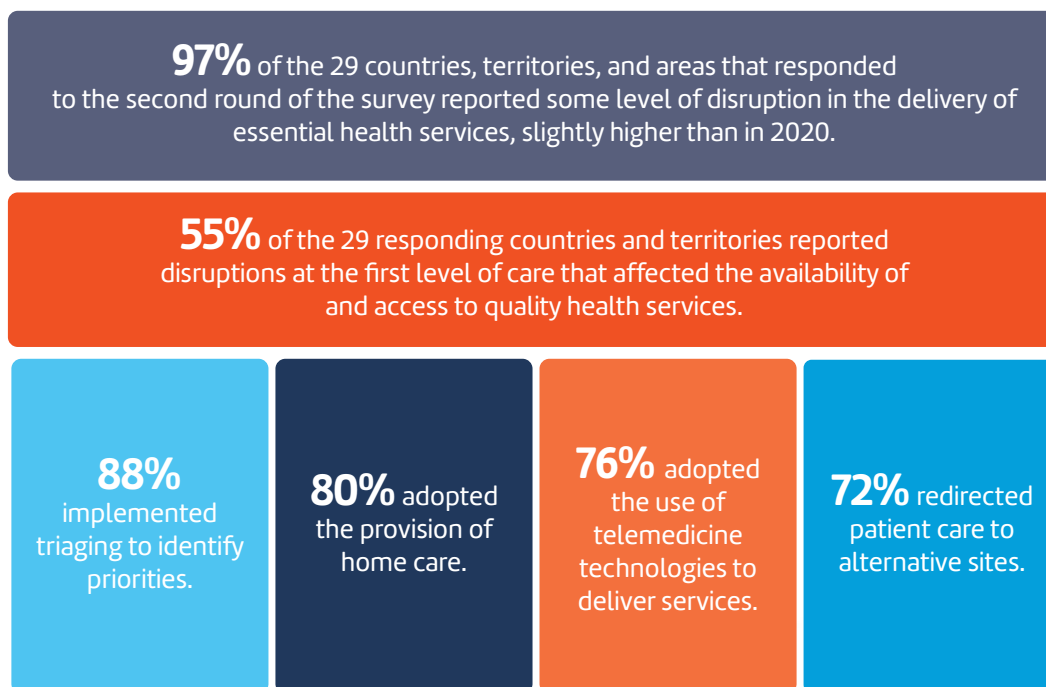
The countries involved are: Belize, Bolivia, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Haiti, Suriname, and Venezuela.

Round Two of the National Survey on the Continuity of Essential Health Services during the COVID-19 Pandemic

The COVID-19 pandemic continues to expose the limitations of health systems across the Region of the Americas and globally. In this context, WHO developed the global Pulse survey on the continuity of essential health services during the pandemic to help monitor and manage the extent of the disruptions to essential health services.

Two rounds of [pulse surveys](#) have been carried out, and PAHO has supported the national surveys conducted in this Region. The second round of the survey was sent to key informants in 51 countries and territories in the Americas in early 2021. The findings provided information on countries’ experiences, the extent of disruptions in a set of tracer services, the reason for the disruptions, and the mitigation strategies implemented.

By providing a quick view of the situation, the survey results enabled decisionmakers to take stock of current challenges. The results also served as a basis for planning processes and resource allocation. PAHO’s Incident Management Support Team (IMST) used the findings to support the planning and implementation of mitigation strategies.



The third round of the WHO pulse survey was carried out in November and December 2021 and will provide an opportunity to assess how the pandemic's impact has evolved over time, with regard to disruptions and rebounds in service delivery; implementation of mitigation strategies; and bottlenecks to the implementation of COVID-19 tools. Preliminary results of the survey are expected in early 2022, including data from 28 countries, territories, and areas in the Americas.

Epidemiological Surveillance of Other Diseases

The COVID-19 pandemic has been ongoing for more than two years in the Americas. During this time, all 51 countries and territories have reported not only COVID-19 cases and deaths but also health systems still facing challenges and routine immunization activities falling behind. The pandemic has affected

compliance with surveillance indicators for vaccine-preventable diseases (VPDs) and, because the pandemic has restricted movement within countries and caused concern among health care workers for their safety, primary health care activities have been reduced. These activities include preventive services such as vaccination, with a consequent decline in vaccination coverage and an increase in the number of susceptible at-risk people. The migration phenomena in the Region, the relaxing of public health and social measures, and the impact of COVID-19 on the capacity of health systems have contributed to the multiple challenges. On 15 December 2021, PAHO launched the [Regional risk assessment on vaccine-preventable diseases \(diphtheria, measles, yellow fever, and polio\) in the context of the COVID-19 pandemic: implications for the Region of the Americas](#). The report assesses the risk of new outbreaks of VPDs of varying magnitude; vaccination coverage; and the principal capacities and vulnerabilities that exist in each subregion.



Additionally, given the coexistence of COVID-19 with dengue and other arboviruses in several countries and territories, PAHO published the [Dengue, Chikungunya and Zika Epidemiological Update in the context of COVID-19](#) (December 2021). In the report, PAHO advises Member States to continue strengthening surveillance, diagnosis, triage, and adequate treatment during the syndemic due to COVID-19 and arboviruses in endemic areas. PAHO also recommends defining strategies to facilitate access to health services for patients with dengue and other arboviruses, in addition to strengthening risk communication, so that patients with warning signs seek health care in a timely manner, thus reducing their risk of acquiring SARS-CoV-2 infections in health facilities.

United Nations Joint Statement on Nutrition in the Context of COVID-19

The COVID-19 crisis poses a threat to all components of the food system, putting the nutritional well-being of the populations in Latin America and the Caribbean at risk. The crisis threatens food availability and the physical and economic access to quality food, leading to higher consumption of ultra-processed or prepackaged products and shifting consumption patterns toward less diversified diets. COVID-19 poses a higher risk in people with obesity and other chronic noncommunicable diseases. Additionally, access to nutrition-related services, including screening, treatment, and counseling, is also at risk in this crisis.

Nutrition continues to be an important area of concern in all countries, as health officials consider the necessary measures to ensure food security during the pandemic. In March 2021, PAHO, with other UN organizations, released a [Joint Statement on nutrition in the context of the COVID-19 pandemic: Latin America and the Caribbean](#).

Mental Health

The pandemic has had a negative impact on the mental health of the general population. According to the second round of the WHO pulse survey, in the first quarter of 2021, 60% of responding countries and territories reported disruptions to mental health services—the area of health services that reported the highest level of disruption. PAHO developed technical and communication materials to address mental health and psychosocial support (MHPSS) during the pandemic, targeting the general population and vulnerable groups, such as frontline and health workers. Training and capacity-building in MHPSS were also provided through virtual courses and webinars.

On World Mental Health Day in October 2021, PAHO launched a social media campaign to raise awareness about the sustained burden the pandemic has placed on the mental health of frontline health workers, inviting them to share their stories and strategies to better manage and cope with this added challenge. The campaign, [Mental Health Now – Tell Your Story](#), collects written and video stories from health care workers in the Americas through Facebook, Instagram, and Twitter. These were compiled and disseminated through PAHO's website and social media channels.



Strengthening mental health responses to COVID-19 in the Americas: A health policy analysis and recommendations

This PAHO paper, published in *The Lancet*, highlights the devastating toll of the ongoing COVID-19 pandemic on the mental health and well-being of populations in the Americas, as well as the impact of service disruptions throughout the Region. Published in November 2021, the data reviewed show that more than four in 10 Brazilians have been struggling with anxiety; depression symptoms have increased five-fold in Peru; and the proportion of Canadians reporting high levels of anxiety quadrupled as a result of the pandemic.

The paper also indicates a stark jump in domestic violence incidents during the pandemic, citing national studies based on helpline records, police reports, and data from service providers, compounding the Region's already high rates of violence, which are triple the global average. The mental health toll on people who experienced COVID-19 is also reviewed. At a time when care and treatment are most needed, there are continuous disruptions in essential services for mental, neurological, and substance use disorders in more than half of the countries in the Region.

The paper also documents COVID-19's mental health impact on vulnerable populations such as younger people, women, people with pre-existing mental health conditions, health and frontline workers, and people of lower socioeconomic status, noting that these groups have been more severely impacted by service disruptions.

Health Workers

Health workers are on the front line of the COVID-19 response and are indispensable to the continuity of health services. The dramatic expansion of health service capacities—including critical care to manage the surge of COVID-19 patients while maintaining other essential health services—has put enormous pressure on health workers. Task shifting and work in high-risk departments, with long shifts and significant exposure to large numbers of COVID-19 patients, has negatively impacted their health, and their mental health in particular.

As of May 2021, health providers who participated in the [COVID-19 Health Care Workers \(HEROES\) Study](#) reported feeling stigmatized and/or discriminated against because of their work with COVID-19. Twenty-two countries in the Americas were included in the study. Most participants, particularly women, reported being concerned about infecting their relatives and others close to them. They received little assistance to balance their at-home responsibilities with workplace duties. Unpublished preliminary data indicate the presence of mild to moderate depressive symptoms, with an increased risk of depression in specific groups, such as primary care doctors and nurses.

Stories from the field

Central America:

Promoting COVID-19 vaccination in Tolupán villages in Honduras

For the past two years, Dr. Ena Banegas has been working in the municipality of Yorito, located in the north-central region of Honduras. The municipality has nine villages, three of which are inhabited by the Tolupán peoples, of which she is a member.

Ena relates that she herself is a recovered COVID-19 patient. “I got infected here, working, following up with positive patients. I got sick in November last year (2020); I was very ill,” she recalls. After recovering, and following the arrival of vaccines in Honduras, Ena, along with her health colleagues, received the first dose of the AstraZeneca vaccine in March 2021, a schedule she completed in June.

In Yorito, vaccination began in June 2021 and, according to Ena, it is helping to reduce the number of infections. This is also the case in the village of the Luquigue tribe, where she is from, and which still has a high incidence. “At the beginning, we vaccinated by age group, starting with people between the ages of 50 and 59 and those 70 years



old and over. Sometimes people came when it was not their turn, which complicated the vaccination process a bit; now we are more fluid,” says a health promoter who works in the municipality for the Honduran Ministry of Health.

PAHO has supported the Honduran health secretariat with training for health personnel on the virus and vaccination. It has collaborated in the involvement of volunteers to accompany the technical teams of health facilities in the promotion and prevention of communicable diseases in several priority departments of the country.

“The arrival of the vaccine gives us hope, because if we become infected with COVID-19 it won’t be too serious. It doesn’t mean that we won’t get infected again, but there is no longer a risk of getting worse,” she stresses, and she emphasizes and repeats this message every time she promotes vaccination in these communities.

[Read more.](#)



Pillar 10. Vaccination

Support the introduction, deployment, and evaluation of COVID-19 vaccines, ensuring their timely and equitable access, and strengthening vaccine safety surveillance.

The development and subsequent rollout of safe and effective vaccines have been game-changers when it has come to reducing severe disease and death from COVID-19; timely and equitable access to vaccines remain critical to ending the COVID-19 pandemic. PAHO has worked tirelessly to ensure that every country receives and administers the number of doses required to protect its population, starting with the people who are most vulnerable.

In order to successfully deploy COVID-19 vaccines, countries in the Region developed National Deployment and Vaccination Plans (NDVPs) that included components ranging from regulatory and logistical issues to human resource needs and equitable distribution, while at the same time prioritizing the people most at risk of infection (e.g., frontline health workers, older persons, those with underlying health conditions).

As WHO states, NDVPs must be realistically costed in order to determine what additional resources are needed to implement the plan. To support this activity, the [WHO-UNICEF COVID-19 Vaccine Introduction and Deployment Costing \(CVIC\) tool](#) was updated in 2021. Subsequently, PAHO developed a Spanish-language version of the online self-administered course on

how to use the CVIC tool to estimate costs related to introducing and deploying COVID-19 vaccines. At the same time, the CVIC user guide was translated into Spanish and adapted to the subregional context.

The Region of the Americas includes 10 AMC (Advance Market Commitment) countries, which are lower- and lower-middle income countries eligible to receive donor-funded doses of COVID-19 vaccines through the [COVAX Facility](#), a global risk-sharing mechanism for pooled procurement and equitable distribution of vaccines. During February 2021, PAHO worked with these 10 countries to submit their NDVP for approval in order to be eligible to receive vaccines from the COVAX Facility. All 10 countries had their plans approved by the Regional Committee and thus were able to receive vaccines through COVAX. PAHO supported another 13 self-financed countries in uploading their NDVP to the COVID-19 Partners Platform.

The PAHO Revolving Fund for Access to Vaccines

For more than 40 years, [PAHO's Revolving Fund](#) has provided access to safe and quality vaccines at affordable prices to Member States and territories in the Americas.

On 11 August 2021, PAHO announced that its [Revolving Fund would purchase COVID-19 vaccines](#) to expand access in Latin America and the Caribbean. Through this initiative, [the Revolving Fund \(RF\)](#) has been procuring COVID-19 vaccine doses to supplement those supplied by the COVAX Facility. This initiative is progressing and benefiting countries that lack the necessary resources and negotiating power to secure sufficient doses to protect their people. It also provides guidance to direct resources to where they are most needed and expedites and removes bottlenecks with donors.

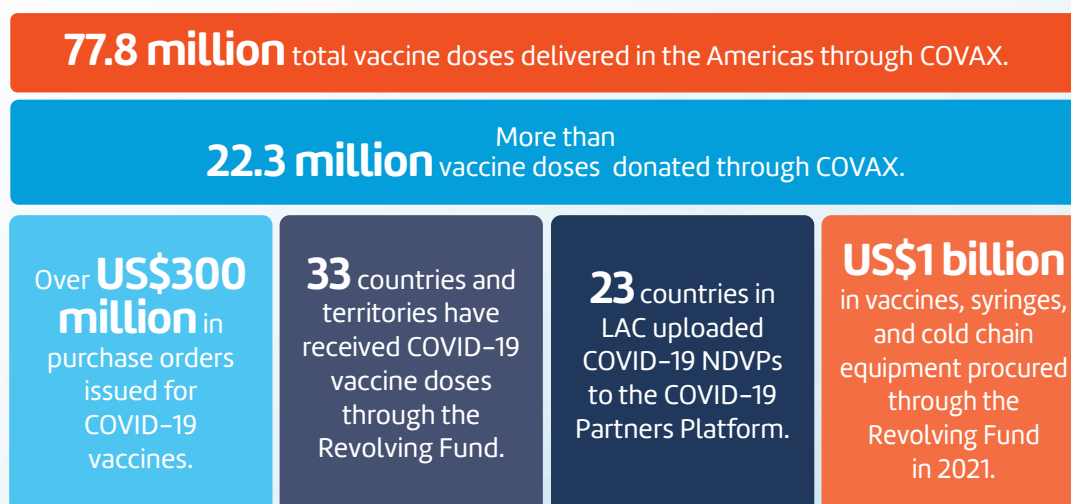
PAHO Member States submitted requests to the RF for COVID-19 vaccines for the last three months of 2021 and the first quarter of 2022. For the remainder of 2022, the demand for vaccines is expected to be dynamic, and requests made during the quarterly demand reconfirmation process may have to be amended.

[This Factsheet](#) outlines the role of the Revolving Fund in global initiatives, including the benefits of

working with and through the COVAX Facility and the opportunities for PAHO Member States to engage in the COVAX Facility, through the Revolving Fund, as a regional bloc.

PAHO has advocated for a greater number of doses to be donated to the Region of the Americas. Through the Revolving Fund, the Organization has been proactively involved in planning and operations related to bilateral donations and in accessing vaccines donated to COVAX by other countries. In addition, PAHO successfully advocated for regional dose-sharing with the United States Government, Global Affairs Canada, Spain, and other European countries, supporting the reallocation of COVAX doses between participating countries.

PAHO supported activities in 30 countries to strengthen cold chain capacity, including: a) evaluating cold chain capacities and needs and updating cold chain equipment inventories; b) holding training workshops on cold and supply chain operations and the handling of COVID-19 vaccines and auto-disable syringes; c) training on ultra-low temperature (ULT)



As of 31 December 2021.

freezers and the storage, distribution, and handling of vaccines at ULT; d) installation of the Vaccination Supply Stock Management web-based software; and e) syringe purchases. PAHO supported the application process for cold chain equipment through Gavi/COVAX in Bolivia, El Salvador, Guyana, Honduras, and Nicaragua.

By the end of 2021, 37 (72.5%) of the 51 countries and territories in the Americas had reached the WHO global target of 40% vaccination coverage. Only one country (Haiti) reported a vaccination coverage rate below 10%. PAHO continues to support all countries to achieve high vaccination coverage rates for priority populations.

COVID-19 Vaccine Effectiveness Studies

PAHO is implementing a multi-country collaborative research network to assess COVID-19 vaccine effectiveness in Argentina, Brazil, Chile, and Colombia, using a standardized protocol for case-control retrospective and cohort. Evaluations have also been conducted based on the SARINET surveillance platform—the Regional REVELAC-COVID-19 protocol—to evaluate effectiveness for influenza and COVID-19 vaccines, using the same methodology (i.e., test-negative design among SARI patients) in Chile, Colombia, Costa Rica, Ecuador, Guatemala, Paraguay, and Uruguay.

Vaccine Safety Surveillance

For all vaccines, PAHO recommends that countries set up a surveillance system to capture events supposedly attributable to vaccination or immunization (ESAVI). This is even more critical for new vaccines such as the COVID-19 vaccine. PAHO staff actively contributed to the development of the [WHO COVID-19 Safety Surveillance Manual](#).



To ensure the implementation of a robust regional safety surveillance system to rapidly detect, notify, and respond to ESAVI and/or adverse events following immunization (AEFI), PAHO supported the development of advanced strategies and informatic tools (national COVID-19 vaccination dashboards, digital vaccination cards, vaccination appointment scheduling systems, nominal electronic immunization registries) to support 15 countries and territories¹ to:

- Strengthen regional and national ESAVI surveillance systems through the digital transformation of case-based databases and DHIS2 modules for notification and investigation.
- Enhance ESAVI data analysis at the regional level and support data analysis in countries.
- Ensure an appropriate data management process at the regional level through the use of Fast Health care Interoperability Resources (FHIR) software to standardize, transform, and transfer national data to the regional and global levels.

PAHO developed a [pharmacovigilance dashboard](#) to support regulatory processes for the introduction and monitoring of the safety of COVID-19 vaccines. The dashboard consolidates, into a single tool, information such as the number of vaccines in different phases of clinical trials; vaccines included in the WHO emergency use list (EUL) and authorized by countries or regions; information on each of the authorized vaccines; and methods used in the pharmacovigilance panel for COVID-19 vaccines.

¹ Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Paraguay, Peru, Puerto Rico, and Saint Kitts and Nevis.



Vaccination Week in the Americas 2021

In April 2021, PAHO held the 19th Vaccination Week in the Americas (VWA). Since its inception, participating countries have vaccinated a total of 908 million persons against multiple diseases such as polio, measles/rubella, influenza, yellow fever, etc. This year, the Organization included the COVID-19 vaccine, where available. VWA is a flexible platform that countries can adapt to focus on their needs and epidemiological situation, mainly aimed at strengthening the general population's confidence in vaccines and immunization, supporting the introduction of COVID-19 vaccines, and promoting immunization during the pandemic.

Forty-three countries participated in the 2021 VWA. According to reports received from five countries (Grenada, Guatemala, Honduras, Nicaragua, and Uruguay), more than 3.1 million individuals were vaccinated against COVID-19; measles, mumps, and rubella (MMR); influenza; and polio, among others. Countries also extended their seasonal influenza

campaigns beyond the week to reach as many individuals as possible.

Support to the Haiti Country Office

The PAHO Revolving Fund and the PAHO Country Office in Haiti worked with international partners, local authorities, and the COVAX Facility to ensure that COVID-19 vaccines arrived promptly and safely and were ready for deployment as soon as possible. PAHO delivered a significant amount of PPE, helped expand care for COVID-19 patients, and provided thousands of tests and laboratory materials to strengthen surveillance activities in Haiti. On 14 July 2021, Haiti received 500,000 doses of COVID-19 vaccines, donated by the United States of America through the PAHO Revolving Fund. The donation was part of the U.S. government's plans to increase COVID-19 vaccination coverage in other countries around the world, counter new waves of infection, and prioritize vaccination of health care workers and other vulnerable populations in neighboring countries in need of vaccines.



The Road Ahead

The year 2021 was part of what undoubtedly has been the most challenging period ever faced by the health sector in the Americas. Due to its rapid spread and devastating health consequences, the pandemic caused by SARS-CoV-2 (COVID-19) impacted people's lives and livelihoods and disrupted decades of progress, growth, and health gains attained by the Region's countries, societies, economies, and development.

It has been well documented that the Region of the Americas is one of the most inequitable in the world, and COVID-19 has highlighted and exacerbated this unfortunate reality. According to the joint report by PAHO and ECLAC on COVID-19,¹ Latin America and the Caribbean are particularly vulnerable due to high levels of labor informality, urbanization, poverty, and inequality, in addition to large population groups living in vulnerable conditions and requiring special attention. The structural challenges, coupled with weak health and social protection systems, have exacerbated the vulnerability of these countries in these difficult times.

Additionally, inequitable access to vaccines further divides the Region. In 2021, substantial efforts were directed to reducing disparities in the management and distribution of vaccines between high- and low-middle income countries. As an example, whereas 11 countries and territories had already reached the 70% vaccination target by 31 December 2021, Haiti had barely vaccinated 1% of its population. Vaccine hesitancy further slowed uptake by the population and prevented full achievement of the potential of vaccination.

The acceleration of infections in the Region – and worldwide – after mid-2021 underscores that, until transmission is effectively contained, infections can surge quickly. The grim pandemic milestone of two million deaths from COVID-19 in the Americas, reached in August 2021, was a distressing reminder that there must be continuous and urgent action to prevent further suffering.

As evidenced by the interim report of the third round of the WHO Global Pulse Survey on Continuity of Essential Health Services during the COVID-19 Pandemic,² carried out in November and December 2021, countries in the Region of the Americas reported the highest average percentage of essential health services disrupted.

In addition to increasing vaccination coverage, key challenges ahead include maintaining essential health services, adapting and expanding surveillance, and improving clinical management of cases and infection prevention and control in health facilities.

With slightly more than half of the population in Latin America and the Caribbean fully vaccinated against COVID-19 at the end of 2021, the Region remains especially vulnerable. Countries must sustain public health measures to limit transmission of the virus and adjust these measures according to prevailing local risks for transmission.

Priority must be given to prevention, using communication campaigns to encourage proactive

1 Health and the economy: a convergence needed to address COVID-19 and retake the path of sustainable development in Latin America and the Caribbean. Available from: <https://iris.paho.org/handle/10665.2/52535>

2 World Health Organization. Third round of the global pulse survey on continuity of essential health services during the COVID-19 pandemic. Interim report. Available from: https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS_continuity-survey-2022.1



action, combatting misinformation, and reminding younger, working-age populations of their risk and the need to protect themselves, including by getting vaccinated when it is their turn.

Health systems should also be prepared to deal with surges in COVID-19 cases as well as with an increased demand for hospital beds and critical care for a range of other illnesses. Health systems should strive for a comprehensive approach to managing the pandemic, adapting this approach to a constantly evolving environment.

Looking forward to a new year and promising developments in COVID-19 therapeutics to treat the virus, curb hospitalizations, and prevent deaths, it is also important to incorporate lessons learned and the best evidence-based practices. Countries must also begin preparing to ensure timely and affordable access to new treatments. The Region has the technical expertise, manufacturing capacity, strong regulatory infrastructure, and an effective pooled procurement mechanism, via PAHO's Strategic Fund, that, if leveraged, will help accelerate access to COVID-19 technologies.

As demonstrated by the surge of the Omicron Variant of Concern at the end of 2021, vaccine inequity is prolonging the current crisis. These glaring gaps must be urgently addressed to provide life-saving protection to all peoples in the Americas. The more COVID-19 circulates, the more opportunities the virus has to mutate. As in the past, the Region's common goal must be focused on bringing down the epidemic curve, expanding access to vaccines to everyone, and saving lives.

It is also crucial that Member States continue to work together, as sharing knowledge and experiences is central to defeating this pandemic. Collaboration across borders enabled vaccines to be developed in record time, variants to be identified quickly, and countries to adjust responses based on the latest evidence.

PAHO will continue to provide technical cooperation to help countries and territories adopt a more holistic approach to COVID-19 response and to support countries in developing and adapting strategies for the continuity of priority public health programs. The experience of the past two years will serve as the foundation for rebuilding a stronger and healthier Region, entering 2022 with a heightened spirit of solidarity and collaboration and renewed energy to defeat COVID-19.



Selected Highlights of PAHO's Response to COVID-19 in Countries of the Americas

From the start of the pandemic
through December 2021



Antigua and Barbuda



Country-level coordination, planning, and monitoring

- Collaborated with partner UN agencies (UNDP, UNICEF, and UNOPS) to procure medical equipment for health facilities treating COVID-19 cases.
- Launched consultations with national health authorities on the development of country strategic preparedness and response plans, according to WHO guidelines.
- Continued publication of the COVID-19 information bulletin, which highlights measures taken by countries to contain the spread of the virus and PAHO support to countries.
- Maintained the Country Office's Incident Management System Team structure and adapted the members' roles to the WHO SPRP pillars to facilitate implementation and reporting.
- Facilitated coordination with the United Nations Resident Coordinator (UNRC) system on COVID-19 initiatives.



Risk communication and community engagement

- Supported the development of risk communication materials for health care workers (HCWs) and the general population.
- Produced and distributed posters and booklets on preventive public health measures.
- Produced a five-part television series and public service announcements (PSAs) for radio on coping with COVID-19, as well as addressing stigma and fear.
- Purchased equipment to strengthen the country's Health Promotion Unit.
- Produced a video highlighting the contributions and issues faced by HCWs in the COVID-19 response.
- Conducted an evaluation of risk communication activities for COVID-19.
- Conducted the webinar "Variants of Concern Delta and Omicron: Transmissibility, Severity, and Impact on Social Mobility: What Will Drive Future Trends and Optimize our Response."
- Developed and disseminated communication materials to address gaps in knowledge and concerns about the COVID-19 vaccines. A conversation series, "A matter of fact," was developed to inform and educate, helping to dispel concerns related to vaccine hesitancy.

- Conducted a four-part webinar on stress management for frontline workers and parents. Worked to build capacity in psychological first aid for first responders and community leaders and launched a mass media campaign on mental health and psychosocial support (MHPSS).
- Produced and disseminated communication materials to promote cervical cancer screening during the COVID-19 pandemic.



Surveillance, rapid response teams, and case investigation

- Disseminated technical guidance on COVID-19 surveillance, including case definitions.
- Worked with health authorities to ensure that their surveillance systems were calibrated with COVID-19 case definitions; introduced data collection tools (e.g., Excel line listing, revised case reporting form).
- Strengthened the country's capacity for outbreak response and data management by installing the Go.Data platform (the WHO contact tracing software for capturing data and monitoring the chain of transmission) and provided training.
- Provided orientation on EpiEstim and CovidSIM, mathematical models for short-term forecasting of cases.
- Provided guidance to national epidemiologists and laboratory personnel on the PAHO regional program for influenza laboratory-based surveillance for SARI/ILI and its link to COVID-19.
- Strengthened surveillance, contact tracing, and data entry by hiring surveillance officers, IT technicians, and data entry clerks and providing national authorities with a vehicle and IT equipment, including laptops and tablets, to assist in these efforts.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.



Points of entry, international travel, and transport

- Provided communication materials, including banners, to raise awareness about COVID-19 among travelers and officers at points of entry.
- Reviewed entry protocols for the reopening of borders as this became feasible and provided feedback to national health authorities as appropriate.
- Provided necessary equipment (e.g., thermal imagers and IT tools for data collection) to strengthen infrastructure for case detection at points of entry.
- Conducted a webinar on considerations for resuming nonessential travel in the Caribbean.



National laboratories

- Disseminated guidelines and protocols for COVID-19 testing.
- Procured and distributed sample collection materials, RT-PCR enzymes, extraction kits, and consumables.
- Trained laboratory staff from the national health laboratory to test for COVID-19, using open platforms for molecular diagnostics.
- Provided tests and reagents to ensure the country's laboratory capacity to detect COVID-19 cases and scale up this capacity as more cases were detected. Conducted a webinar on scaling up laboratory testing in the Caribbean.
- Collaborated with the regional team to establish an emergency stock of COVID-19 laboratory materials for distribution to countries and territories in the subregion.
- Facilitated training on molecular testing to establish on-island testing capacity.
- Delivered test kits and critical material, including

reagents, to implement the reference protocol for SARS-CoV-2. For the first time, Antigua and Barbuda's national laboratory has installed capacity for PCR laboratory testing.

- Supported the strengthening of laboratory capacity to diagnose SARS-CoV-2 through the in-country visit of a laboratory consultant and the continued provision of laboratory supplies, such as GeneXpert cartridges and rapid antigen test kits.
- Disseminated updates on COVID-19 diagnostics, including recommendations for the use of rapid antigen tests.



Infection prevention and control and protection of the health workforce

- Provided PPE and supplies for health care workers to keep them safe as they respond to the pandemic.
- Trained HCWs in IPC techniques. Trained nurses, doctors, and surveillance officers to use PPE safely and appropriately.
- Trained 90% of the country's hospital staff in infection prevention and control.
- Provided handwashing and hand sanitizing stations to health care facilities to protect HCWs.



Case management, clinical operations, and therapeutics

- Supported the development of an isolation unit in acute health care settings.
- Improved local health system capacity and protected HCWs to safely detect and deliver health care services.
- Provided training in critical care management of COVID-19 patients to personnel from the nursing fraternity.

- Procured vital signs monitors, IV infusion pumps, ventilators, and oxygen concentrators to augment capacity for management of COVID-19 cases.



Operational support, logistics, and supply chain

- Supported the MoH to procure and manage arrangements for transportation required to strengthen case management and surveillance.



Maintaining essential health services during the pandemic

- Delivered virtual training in psychological first aid for HCWs, community leaders, teachers, and hotline workers to provide mental health and psychosocial support (MHSP) services to strengthen individual and community resilience.
- Developed standard operating procedures for MHPSS during emergencies. Provided the services of a psychologist to provide MHPSS to HCWs. Procured a vehicle for use by the community mental health team to strengthen outreach for mental health services. Provided capacity-building for HCWs on the Mental Health Gap Action Plan.
- Worked with the national immunization program to ensure continuity in routine vaccinations during the COVID-19 pandemic; created a forum to exchange experiences and challenges in adjusting the delivery of immunization services. Provided training on the use of the WHO/UNICEF annual Joint Reporting Form (JRF) and the new monthly reporting system for vaccines. Launched a virtual campaign to support the annual Vaccination Week in the Americas.
- Supported the promotion of breastfeeding during the pandemic, including with an address by the Minister of Health; visual displays at wellness centers; dissemination of information through health talks; online social media ads; training for staff and

couples; call-in radio programs; and reactivation of breastfeeding support groups. PAHO produced six videos for online dissemination, using identifiable members of the local community whose messages would resonate with the population.

- Supported a panel discussion on gender-based violence and men's health to discuss how the pandemic has influenced the risk of intimate partner violence. This session, with 72 participants, was held at night to facilitate the participation of men.
- Provided guidance and training for caregivers and family members of children with disabilities on care during the COVID-19 pandemic. Procured IT equipment to facilitate online learning for children with disabilities.
- Convened a Young People's Dialogue and a COVID-19 awareness webinar for youth leaders.
- Strengthened the capacity of vector control programs to prevent outbreaks of dengue, providing insecticide application equipment, insecticides, and entomological supplies.
- Implemented online community workshops for the Chronic Disease Self-Management Program to address the decreased utilization of these services during the pandemic.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Conducted training sessions on surveillance operations to detect and report events supposedly attributable to vaccines or immunization (ESAVI) and cold chain management.
- Provided technical support for development of the COVID-19 National Deployment and Vaccination Plan and supported the use of VIRAT, the Vaccine Country Readiness Assessment tool.
- Provided technical support to the MoH for the introduction and rollout of the COVID-19 vaccine.
- Trained national immunization focal points in the management of the COVID-19 vaccine; conducted webinars on COVID-19 vaccination and international travel and on monitoring COVID-19 vaccine deployment.
- Improved the capacity to store and manage vaccines and address cold chain needs, including the procurement of cold chain equipment.



Argentina



Country-level coordination, planning, and monitoring

- Created the COVID-19 network of coordinators, with delegates from each UN agency, fund, and program, to provide advice and training for staff and an ad-hoc group of physicians to provide counseling to UN staff on vaccination-related cases and issues.
- Undertook a technical review of all COVID-19 documents prepared by the UN system in Argentina.
- Transmitted technical information (provisional guidelines, recommendations, protocols, and methodologies) to counterparts at the national and subnational levels, enabling them to adapt the material to their context and incorporate it, where appropriate, into existing protocols, instruments, and approaches.
- Supported the purchase of COVID-19 supplies through PAHO's Strategic Fund and managed the WHO Partners Platform in Argentina.
- Supported the MoH in the development and implementation of the 2021–2024 National Health Quality Plan, including topics on COVID-19 and human resources for health.
- Contributed to the development of a new digital version of the Argentine Journal of Public Health to disseminate scientific evidence on COVID-19: updated the editorial policy, COVID-19 information, and PAHO/MoH technical cooperation activities.

- Trained subnational teams of indigenous health leaders, health workers, and nurses involved in the prevention and control of COVID-19 infections.
- Recruited IT specialists to provide the required support to ensure the continuity of the COVID-19 response.



Risk communication and community engagement

- Provided pandemic training to more than 600 national and provincial journalists and to journalists from 65 municipal communication teams.
- Collaborated with UN agencies, funds, and programs in Argentina to incorporate an ethnic-racial approach to the communication component of infection prevention and control in the context of COVID-19 for Afro-descendants, Roma, and other groups such as migrants, refugees, the incarcerated, and older persons; printed and distributed these materials in Argentina.
- Collaborated on a campaign to promote blood donation in the context of COVID-19, together with the MoH and the Office of the Presidency.
- Developed messages for contact tracing, adapted to the general population and health workers.



Surveillance, rapid response teams, and case investigation

- Incorporated the WHO Go.Data tool into the national surveillance system to support contact tracing. Together with the MoH, trained Argentina's epidemiology teams (800 local and provincial users in 22 of the 24 regions) and helped develop seven Go.Data user guides.
- Evaluated the current state of COVID-19 telehealth services in 547 public health departments in 23 provinces and Buenos Aires in order to identify actions to strengthen them.
- Supported the government in establishing a new sentinel surveillance system with five sentinel centers for influenza and other respiratory viruses, including COVID-19.
- In coordination with the National Center for Community Organizations (CENOC), mobilized six NGOs working with vulnerable groups to help implement COVID-19 ("DetectAR") case detection, surveillance, and contact tracing strategy.
- Trained epidemiology professionals to use the EpiEstim tool to calculate the virus' effective reproductive rate and CovidSIM to predict how it will spread, taking into account public health measures and the health system.
- Provided advice to health authorities in the provinces of Córdoba and Jujuy to analyze excess mortality and COVID-19-related comorbidities.
- Hired 10 professionals (epidemiologists, hospital engineers and architects, information systems engineers) to provide direct support to the MoH pandemic response.
- Mapped COVID-19 research and innovation initiatives in which the country is participating, together with the health research directorate of the MoH. Published a section on COVID-19 research and innovation initiatives in the Argentina 2020 Basic Indicators.¹
- Trained 50 health professionals in Buenos Aires on human resources for health policies in the context of the pandemic.
- Improved the transparency and democratization of data through mapping, monitoring, and ongoing publication of critical data, through an information hub established in conjunction with the MoH.
- Conducted an Intra-Action Review (IAR) of the external evaluation of the COVID-19 prevention strategy for schools in the province of Buenos Aires.
- Conducted an internal evaluation during implementation of the measures adopted to address COVID-19 in the municipality of San Antonio de Areco (Buenos Aires) and hired a consultant to support this activity.
- Implemented a project to monitor Ag-RDT testing in schools in the province of Córdoba and the city of Pergamino (province of Buenos Aires). This support included the development of protocols, the hiring of consultants for each province, and training on the Go.Data platform for contact tracing and COVID-19 transmission dynamics in educational facilities.
- Hired 12 consultants to provide technical support to the provinces of Buenos Aires, Santa Fe, and Entre Ríos to conduct a study on the dynamics of COVID-19 transmission in educational facilities in the Republic of Argentina.
- Trained the epidemiology team in the provinces of La Rioja, Jujuy, Córdoba, San Luis, and Entre Ríos and the "Dr. Julio Maiztegui" National Institute of Human Viral Diseases on the use of the Go.Data tool.

1 Pan American Health Organization. Indicadores Básicas de Argentina, 2020. Available from: <https://iris.paho.org/handle/10665.2/53210>



Points of entry, international travel, and transport

- Coordinated with the Secretariat of Foreign Affairs and the PAHO focal point for the International Health Regulations (IHR) to consider recommendations to reopen points of entry in the context of COVID-19.



National laboratories

- Provided the first PCR kits and inputs to train more than 100 subnational laboratories in the 24 provinces as part of a decentralized and expanded laboratory testing network.
- Donated enzymes and primers to the national laboratory network for PCR diagnostic testing.
- Donated Ag-RDT tests for use at the primary care level.
- Donated reagents and hired staff to support laboratories in the new Argentinian Genomic Network.



Infection prevention and control and protection of the health workforce

- Trained 300 nurses countrywide and hospital psychiatric staff and managers on infection prevention and control best practices.
- Trained indigenous and other health workers (including nurses) on COVID-19 infection, prevention, and control at the subnational level.
- Provided technical guidance to develop and disseminate a publication on the prevention and control of COVID-19 transmission, with a focus

on isolation and follow-up of suspected and/or confirmed cases, as well as guidance for contact tracing.



Case management, clinical operations, and therapeutics

- Trained national and subnational teams to use PAHO tools to calculate the needs related to PPE, medical staff, supplies, and equipment to handle expected cases of COVID-19.



Operational support, logistics, and supply chain

- Shared information about SUMA, PAHO's humanitarian supply management system, with multisectoral professionals in Santa Fe province.
- Supported the mobilization of health coordinators at the subnational level.



Maintaining essential health services during the pandemic

- In the context of the pandemic, supported the MoH in developing guidelines on mental health; NCDs; immunization; maternal, child, and adolescent health; older persons; and breast, cervical, and colorectal cancers.
- Conducted the research study on the "Impact of the COVID-19 pandemic and adaptive response of health services."
- Supplied kits and portable equipment to the Chaco Salteño water authority to monitor the quality of water for human consumption in decentralized and/or isolated municipal water supply systems during the COVID-19 pandemic.

- Conducted a research study on the impact of the pandemic on health services and adaptive response, with a focus on protecting sexual and reproductive health rights. Also conducted a case study on the pandemic, mental health, human rights, and discrimination among adolescents in the Chaco region.
- Supported the development of an instrument to certify the quality and safety of primary care in the context of COVID-19.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Worked with the National Immunization Commission to share information about the COVAX Facility as a means of accessing COVID-19 vaccines.
- Supported Argentina in developing a COVID-19 National Deployment and Vaccination Plan and supported the use of VIRAT, the Vaccine Country Readiness Assessment tool.
- Provided training on the implementation of a cold chain system for different COVID-19 vaccines, and on the use of syringes and disposable materials.

Additional trainings focused on vaccine preparedness, registration, and safety.

- Implemented the ESAVI surveillance system in seven sentinel units (active surveillance; five reports to the regional system) and real-time case notification (passive surveillance). Supported the implementation of a vaccine effectiveness study (Sputnik, Sinopharm, and AZ) to assess reduction in the mortality rate of persons aged 60 or older.
- Supported the development of a new ESAVI/AESI (adverse events of special interest) surveillance module for COVID-19 vaccination and dashboards for the local level, based on the electronic vaccine information system (NOMIVAC).
- Supported the implementation of ESAVI sentinel surveillance units in the provinces.
- Supported the “Subnational Workshop on Strengthening ESAVI Surveillance Capacities in Argentina.”
- Donated a temporary vaccination module to the Ministry of Defense. This module contained sufficient structures and non-medical equipment to set up an EMT with vaccination capacity, including storage and management capacity; electricity; heating, ventilation, and air conditioning (HVAC); and hygiene and sanitation.
- Purchased computer equipment for the country’s 24 provinces and the Ministry of Health’s EPI technical team.
- Supported the MoH in its analysis of vaccine effectiveness, which included hiring researchers to draft publications for international journals. Funded and technically supported Argentina’s participation in the regional multicenter study evaluating the effectiveness of the COVID-19 vaccine.



Bahamas



Country-level coordination, planning, and monitoring

- Provided ongoing technical advice and operational support to develop public health and COVID-19 outbreak prevention and control policies: clinical management; IPC; disease surveillance; quarantine/isolation/follow-up of cases and contacts; mental health and psychosocial support (MHPSS); travel; employers and schools; and social support for vulnerable groups (e.g., urban poor, migrants, homeless, unemployed, older people, persons with disabilities, persons deprived of their liberty, and other institutionalized groups).
- Supported the MoH in mobilizing financial and technical support for the COVID-19 response from other UN agencies, foreign missions, and public sector and civil society groups.
- Advised on legislative policies, strategies, and considerations on MHPSS and support for vulnerable groups, as noted above.
- Participated in discussions with the Prime Minister, the Cabinet, the opposition, and the Chamber of Commerce on the COVID-19 situation, the links between public health and the economy, and options for strengthening the public health response.



Risk communication and community engagement

- Supported national authorities in developing and rolling out their risk communication strategies and products through press conferences, town hall meetings, radio/TV interviews, and social media to reach all Bahamians.
- Provided occasional logistical support to the MoH for the preparation and printing of communication products.
- Collaborated with the IOM and MoH to prepare Haitian Creole-language communication products for use with the Haitian migrant community.
- Participated in periodic press conferences, town hall meetings, and radio/TV interviews.
- Developed new corporate risk communication and public education products (mental health; cybersafety for children; prevention of gender-based violence and substance abuse; parenting during COVID-19; and COVID-19 quarantine/isolation, vaccination, and public health and social measures) for dissemination through PAHO social media platforms, via local mass media, and through partner agencies.



Surveillance, rapid response teams, and case investigation

- Worked with the MoH to adapt PAHO guidelines on epidemiological surveillance, contact tracing, case isolation, and quarantine of contacts to the context of the Bahamas.
- Supported the MoH in data management and reporting, including training on the use of Go.Data, the WHO contact tracing tool, to analyze chains of transmission.
- Provided technical assistance to review medical records to assist with the classification of deaths.
- Provided financial support to produce videos for an online contact tracing course (collaborative project between the University of the Bahamas and the MoH).
- Supported the MoH with COVID-19 outbreak investigations and assessments as well as vaccine distribution on the Family Islands, namely Andros, Cat Island, Eleuthera, and the Berry Islands



Points of entry, international travel, and transport

- Provided recommendations for appropriate IPC measures at points of entry and trained staff working at these points (airport, harbor).
- Contributed to the preparation of communication materials on the health risks of COVID-19 for use at points of entry.



National laboratories

- Strengthened the National Reference Laboratory by providing training, reagents, enzymes, controls, primers, and RNA extraction kits to support COVID-19 testing.

- Donated GeneXpert and other PCR testing machines and swab tests for expansion and decentralization of laboratory testing capacities as the number of cases surged.
- Supported the establishment of a laboratory subcommittee in the EOC to discuss and resolve issues related to operations, surveillance, and reporting for COVID-19 antigen testing.
- Supported the shipment of samples for viral genomic sequencing to PAHO Collaborating Centers in Brazil, Panama, and Trinidad and Tobago.



Infection prevention and control and protection of the health workforce

- Supported the MoH with access to WHO and PAHO IPC and clinical management guidelines and online training resources.
- Provided guidance to the MoH to develop standard operating procedures for IPC.
- Collaborated with the MoH on investigation into risk factors associated with infections among health workers.
- Offered an online IPC course (total of 20 hours over 10–12 weeks) for 36 health care staff from primary health care clinics and hospitals.
- Facilitated the IPC program assessments of national health care facilities and developed a roadmap for improvement that includes short- and medium-term recommendations.



Case management, clinical operations, and therapeutics

- Provided modular units that were adapted to expand isolation and triage capacity in two hospitals.
- Provided guidance to the MoH in the development and

updating of clinical guidelines for the management of patients according to the classification of severity in primary care clinics and hospital settings.

- Advised the MoH on the expansion of acute care services in hospitals, workflow, and workplace to minimize COVID-19 infections.
- Provided medical equipment and devices to strengthen the response to COVID-19 cases in the main hospitals and primary health clinics.



Operational support, logistics, and supply chain

- Procured and delivered, in a timely manner, laboratory equipment and supplies, specifically primers and probes, PPE, hand sanitizers, oximeters, ventilators, and nasopharyngeal swabs to enable The Bahamas to ramp up testing for COVID-19.
- Provided guidance to improve procurement operations, including using the WHO COVID-19 Supply Portal, which placed The Bahamas in the global queue for items impacted by supply chain limitations and optimizing use of PAHO procurement mechanisms.



Maintaining essential health services during the pandemic

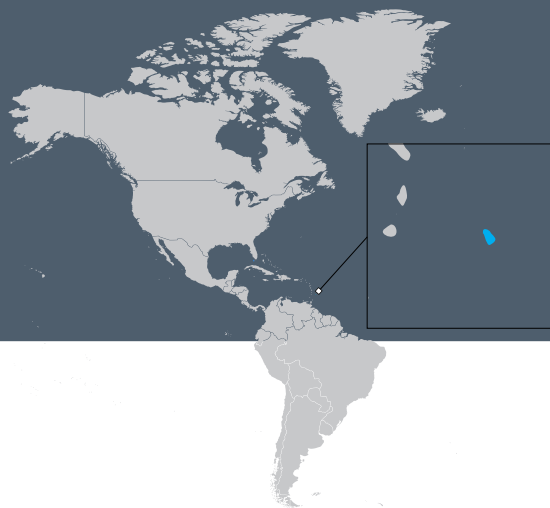
- Provided guidance, guidelines, and links to PAHO and WHO webinars and meetings to aid the MoH in selecting, adapting, and maintaining essential health services in the face of the COVID-19 pandemic.
- Supported the rapid assessment and monitoring of the continuity of essential health services during the COVID-19 pandemic, using a WHO assessment tool.
- Provided sanitation supplies to various organizations that deliver services to vulnerable populations,

including older persons, migrant groups, displaced persons, adolescent parents, and drug rehabilitation centers.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Participated in planning and development of the National COVID-19 Vaccination Strategy and Plan, using WHO and PAHO guidelines.
- Supported a workshop for the introduction of COVID-19 vaccines, including cold chain management.
- Supported the MoH in strengthening regulatory capacities for the registration and importation of COVID-19 vaccines and pharmaceuticals.
- Provided the MoH and relevant stakeholders with updated information related to the COVID-19 vaccines, available through the websites of WHO, PAHO, and other accredited public health organizations.
- Provided technical support to the national vaccination committee.
- Provided technical and financial support for communication campaigns to educate the public and promote vaccination.



Barbados



Country-level coordination, planning, and monitoring

- Launched consultations with national health authorities on the development of country strategic preparedness and response plans for COVID-19, according to WHO guidelines.
- Helped national health authorities access needed technical support/supplies to enable the country to effectively respond to the pandemic.
- Coordinated with the UN system to develop and implement the Multi-Sectoral Response Plan for the Eastern Caribbean, in coordination with CDEMA and other partners.
- Continued publication of the PAHO Country Office information bulletin, including measures taken by countries to contain the spread of the virus and highlights of PAHO's support to the Member States.
- Maintained the structure of the Country Office Incident Management System Team and adapted the roles of members to the pillars of the WHO SPRP to facilitate implementation and reporting.
- Facilitated coordination with the United Nations Resident Coordinator (UNRC) system on COVID-19 initiatives.



Risk communication and community engagement

- Produced posters and booklets on preventive public health measures for COVID-19.
- Produced and disseminated social media cards, via Facebook, Twitter, and Instagram, on coping with stress-related issues during the pandemic.
- Conducted a needs and readiness assessment for community surveys on the Psychological First Aid (PFA) course. Facilitated capacity-building in PFA for community and religious leaders, teachers, and influencers so that they can provide basic mental health and psychosocial support aimed at strengthening individual and community resilience.
- Hosted a virtual youth dialogue titled "COVID-19: Adjusting to the new normal" for 1,400 persons.
- Produced a number of videos, including two on hand hygiene and mixing of disinfecting solutions; a video and a jingle on COVID-19 and discrimination; a video highlighting the contributions and issues faced by HCWs in the COVID-19 response; educational videos for parents and children, addressing common stressors during the pandemic, coupled with upcoming exams; and a video on healthy eating.
- Published a case study on Barbados' leadership and cooperation in containing COVID-19.
- Collaborated with national authorities to produce and air videos on the safe reopening of schools.

- Provided technical assistance for a national consultation entitled “A Conversation on Ageing and Elder Affairs: Forming the Narrative.”
- Conducted a four-part webinar series on stress management for frontline workers and parents. Worked to build capacity in PFA for first responders and community leaders and launched a mass media campaign on MHPSS.
- Conducted the webinar “Variants of Concern Delta and Omicron: Transmissibility, Severity, and Impact on Social Mobility: What Will Drive Future Trends and Optimize our Response.” Developed and disseminated communication materials to address gaps in knowledge and concerns about the COVID-19 vaccines. A conversation series, “A matter of fact,” was developed to inform and educate, helping to reduce vaccine hesitancy.



Surveillance, rapid response teams, and case investigation

- Worked with health authorities to ensure that surveillance systems were calibrated with COVID-19 case definitions and introduced data collection tools (e.g., Excel line listing, revised case reporting form).
- Provided orientation on Go.Data, the WHO contact tracing software for data capturing and monitoring the chain of transmission, and on EpiEstim and CovidSIM, mathematical models for short-term forecasting of cases.
- Procured computers, tablets, and laptops and hired surveillance officers to support COVID-19 surveillance and contact tracing. Provided four polyclinics with IT equipment to enhance surveillance capacities.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.



Points of entry, international travel, and transport

- Produced communication materials to raise awareness about risks from COVID-19 at points of entry (POE).
- Regularly reviewed entry protocols for the reopening of borders and provided feedback to national authorities.
- Provided necessary equipment (e.g., thermal imagers and IT tools for data collection to strengthen infrastructure for case detection at POE).
- Hosted a webinar on considerations for resuming nonessential travel in the Caribbean.



National laboratories

- Disseminated guidelines and protocols for COVID-19 testing, procurement, and distribution of sample collection materials.
- Procured and distributed RT-PCR enzymes, extraction kits, and consumables.
- Trained laboratory staff in theoretical aspects of molecular diagnostics.
- Conducted a webinar on scaling up laboratory testing in the Caribbean.
- Established an emergency stock of COVID-19 laboratory materials for distribution to countries and territories in the subregion.
- Disseminated updates on COVID-19 diagnostics, including recommendations for use of rapid antigen tests (Ag-RDTs) for COVID-19.
- Procured additional laboratory test kits, rapid antigen tests, and consumables in support of laboratory strengthening for the diagnosis of SARS-CoV-2 and trained laboratory staff in practical aspects of diagnosis of SARS-CoV-2.

- Conducted an assessment of the laboratory testing algorithm and strengthened laboratory capacity by hiring laboratory technologists.



Infection prevention and control and protection of the health workforce

- Delivered PPE, masks, and PPE kits to protect frontline health workers and priority health facilities that receive and manage COVID-19 cases.
- Assessed isolation units and provided recommendations on how they should be designed and which IPC measures should be considered.
- Provided infrared thermometers, resource packs, water stations, floor markers, tables with shelter coverings, and IT equipment (laptops, tablets, etc.) to support the safe reopening of schools.



Case management, clinical operations, and therapeutics

- Conducted a webinar for health care workers on the clinical management of COVID-19, focusing on experiences and lessons learned from across the Region.
- Improved local health system capacity and protected health care workers to safely diagnose COVID-19 cases and deliver health care services.
- Provided eight vital signs monitors, eight IV infusion pumps, and five oxygen concentrators to augment the capacity for managing COVID-19 cases.
- Trained nursing staff in critical care management of COVID-19 patients.
- Provided brochures with guidance on home isolation and patient care.



Operational support, logistics, and supply chain

- Ensured the movement of essential medical supplies to the Eastern Caribbean and the British Overseas Territories through a partnership with the Regional Security Mechanism. The Barbados Defense Force helped with storage and distribution of medical supplies.
- Procured a vehicle for isolation and health facilities to support supply chain management and monitoring.
- Deployed a consultant to provide logistical support in supply chain management and the gathering of key monitoring indicators.



Maintaining essential health services during the pandemic

- Worked with the country's immunization program to ensure continuity in vaccinations during the COVID-19 pandemic and create a forum to exchange experiences and challenges in adjusting the delivery of immunization services.
- Convened a webinar on "Dengue Response during the COVID-19 Pandemic." The webinar targeted policymakers, health experts, and medical and public health practitioners. Helped to strengthen the capacity of the vector control program to prevent and control dengue in the midst of the COVID-19 pandemic and produced a video and jingle on dengue prevention during the pandemic.
- Provided training on the use of WHO/UNICEF's annual Joint Reporting Form (JRF) and the new monthly reporting system for vaccines, allowing national authorities to monitor the impact of the pandemic on the immunization program.
- Participated in the Vaccination Week in the Americas virtual campaign: shared guidance, posters, and key messages to support Barbados in developing this campaign.

- Conducted training with MoH focal points on considerations for children with disabilities, including continued specialized health services for the children and their families.
- Convened a virtual dialogue for young people to discuss what it will take to adjust to this new way of living and how to cope with pandemic-related isolation in a positive way.
- Collaborated with UNICEF to provide MHPSS support to the affected community.
- Implemented a risk communication campaign during COVID-19 for persons living with NCDs. Hosted a webinar on “Building Back Better NCD Services.”
- Offered online training for health care workers to implement the Self-Management for Chronic Disease Program and provided manuals and tablets to support the program’s implementation.
- Shared technical guidance on maternal care during COVID-19 and prepared a summary fact sheet on the increased risk of pregnant women to COVID-19 complications.
- Developed a technical document to provide guidance on strategies to engage young people in the COVID-19 response.
- Provided technical assistance for the development of a national consultation entitled “A Conversation on Ageing and Elder Affairs: Forming the Narrative.” This joint effort between the MoH and the Ministry of People Empowerment and Elder Affairs (MPEA) was a first step in developing a new national policy and strategic and action plans on ageing and the elderly in Barbados.
- Helped promote PAHO’s online training on Tobacco Cessation for Primary Health Care to the general public.
- Established sanitation and hygiene stations in special needs schools. Developed a school nutrition policy to address unhealthy eating and inadequate exercise in children.

- Developed an exercise prescription template to promote physical activity among patients at the primary care level.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Conducted training sessions on ESAVI surveillance and cold chain management. Provided technical assistance for the development of a Plan for ESAVI Surveillance. Provided IT equipment to strengthen country capacity for ESAVI.
- Provided technical support to develop the COVID-19 National Deployment and Vaccination Plan and to support vaccine introduction readiness using the VIRAT.
- Procured two vehicles to support the rollout of the COVID-19 vaccination program.
- Provided assistance to develop and distribute electronic COVID-19 vaccination certificates.
- Conducted webinars on COVID-19 vaccination and international travel and on monitoring COVID-19 vaccine deployment.



Belize



Country-level coordination, planning, and monitoring

- Provided ongoing technical support to the Ministry of Health and Wellness (MoHW) in country preparedness and response to the COVID-19 pandemic.
- Held coordination meetings with the UNCT, providing COVID-19 updates for the Resident Coordinator and UNCT members. Chaired meetings of the UNETT to discuss the status of business continuity plans by all entities and review and finalize the UN Hurricane Contingency Plan, particularly in the context of COVID-19. Participated in discussions on assessments of the 2021 hurricane season preparedness, facilitated by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), based in Panama.
- Donated IT equipment to the MoHW to strengthen emergency communications, providing both national- and district-level Health Emergency Operations Centers (EOCs) with the capacity to maintain 24-hour radio communication during health emergencies and disasters.
- Organized and facilitated a three-day workshop with the MoHW on the development of the COVID-19 Operational Plan for 2022–2023; facilitated a virtual meeting with the MoHW, PAHO/WHO, and consultants to prepare Belize's new Country Cooperation Strategy 2022–2026.



Risk communication and community engagement

- Produced COVID-19 public service announcements, which were aired on national and local media (radio and television). This included PSAs on the benefits and safety of the vaccine. Produced two video PSAs: one targeting men and COVID-19 and a second advocating for the use of masks.
- Donated 400 English and 100 Spanish booklets with information on COVID-19 for use by community health workers as they deliver services in their villages.
- Joined the MoHW COVID-19 Vaccine Communication Committee to develop a communication strategy for the vaccine rollout; provided ongoing technical guidance and support for the vaccine communication and implementation plan.
- Printed posters on COVID-19 preventive measures in indigenous languages (Garifuna, Mopan Maya, and Q'eqchi Maya).
- Developed a 2021 Communications Strategy for the Country Office to support activities under international partnership agreements, including strategies on COVID-19 communication and COVID-19 vaccine communication.
- Collaborated with the MoHW communications team on COVID-19 risk communication and community engagement; strengthened the capacity of the

national COVID-19 vaccine information system by procuring the necessary IT equipment for use at vaccination sites.

- Donated equipment and supplies, including PA systems, projectors, televisions, tents, and chairs, to the MoHW to support the vaccination campaign. Additionally, donated t-shirts and bumper stickers to the MoHW to support the vaccine deployment campaign.
- Donated 175 posters on smoking and COVID-19 to the National Drug Abuse and Control Council (NDACC). These posters will be used by field officers to increase public awareness about the multiple risks of being infected with COVID-19 and smoking.
- Donated 298 booklets to promote the protection of the Human Rights of Older Persons to the National Council on Ageing (NCA). These booklets will be used to sensitize the management of residential homes and caregivers within public and private residential homes.



Surveillance, rapid response teams, and case investigation

- Supported strengthening surveillance of COVID-19 and other respiratory infections. Hired 19 contact tracers to enhance rapid detection, timely quarantine, and isolation.
- Facilitated data capture from COVID-19 patients at the Karl Heusner Memorial Hospital (KMH) for inclusion in the WHO Global COVID-19 Clinical Data Platform.
- Organized virtual training and meetings with the MoHW and the Inter-American Development Bank on integrating malaria surveillance into the COVID-19 surveillance.



Points of entry, international travel, and transport

- Provided technical guidance on a document on implementing the International Health Regulations at ports, airports, and ground crossings.



National laboratories

- Donated consumables and reagents, including enzymes, probes, and primers, to support the genomic sequencing of Variants of Concern and to support the continued scale-up of COVID-19 diagnosis. Provided technical guidance to the MoHW for genetic sequencing of SARS-CoV-2 and the shipment of samples to regional laboratories for genotyping.
- Procured 1,250 units of nasopharyngeal swabs, including transport, for the MoHW and 40 boxes of 96 well plates to the Central Medical Laboratory (CML) to support the COVID-19 response.
- Delivered two GeneXpert machines to the MoHW and the CML.



Infection prevention and control and protection of the health workforce

- Conducted an assessment of the National Infection Prevention and Control Program and shared the report with the MoHW. The findings were discussed, and recommendations were made to address the gaps identified.



Case management, clinical operations, and therapeutics

- Continued to provide technical guidance on case

management, clinical operations, and therapeutics for COVID-19, through the dissemination of updated recommendations for COVID-19 therapies and recommendations from the WHO Solidarity Trials. Conducted webinars related to COVID-19 patient management, including prognoses, mental health and psychosocial support, and the management of complications and sequelae of the disease.

- Facilitated procurement/donation of medical equipment for the KMH: 20 patient monitors; 112 fingertip pulse oximeters; five oxygen concentrators; six high-flow nasal cannula machines (HFNC); one BI-PAP; two portable ultrasound machines; three defibrillators; and accessories to enhance capacity of the COVID-19 critical care unit.
- Disseminated information on strengthening regulatory capacity, including pharmacovigilance, and launched a capacity-building initiative to strengthen the supply chain management system through a series of webinars that engaged various levels of the health system involved in the supply chain.
- Supported interprogrammatic work to build capacity in health technology management (HTM). Following the development and eventual adoption of the MoHW National Maintenance Policy and Plan, consultations were held in districts, leading to the first national Health Technology Management webinar, carried out with the University of Vermont, a PAHO/WHO Collaborating Center on HTM.



Operational support, logistics, and supply chain

- Provided assistance to MoHW to establish a drug procurement mechanism to ensure access to quality drugs.
- Sourced both local and international suppliers for COVID-19-related equipment, such as hospital beds, portable ultrasound, nasal cannulae, incinerator, generator, etc.

- Supported the planning of capacity-building activities to strengthen an integrated supply chain management system that includes forecasting of ARVs and COVID-19 PPE, tests, and supplies, as well as the management of Central Medical Stores.
- Logistics arrangements made for receipt of 185 boxes of face masks, defibrillators, and accessories.



Maintaining essential health services during the pandemic

- Conducted a virtual technical cooperation study tour between Belize and Uruguay to improve the structure, organization, and management of health services in Belize. During this exchange, Uruguay shared its experience in health sector reform in pursuit of universal health. Key aspects included governance, regulation, health financing model, and integrated health service delivery networks.
- Facilitated Belize's participation in the third round of the WHO Pulse survey on the continuity of essential health services during the COVID-19 pandemic.
- Facilitated development of the MoHW Operational Plan 2022-23, taking into consideration the COVID-19 pandemic, in alignment with national strategic health priorities.
- Facilitated surveillance of maternal, perinatal, and sexual and reproductive health during the COVID-19 pandemic, including an analysis of the impact of interrupted essential health services on specific indicators related to maternal, reproductive, and perinatal health.
- Trained 70 health care workers initially (and later, trained others) to maintain malaria surveillance beyond the COVID-19 pandemic to ensure and sustain the elimination of the disease; held workshops on the Malaria Microscopy Quality Assurance Manual; assisted in the procurement of malaria rapid test kits.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Carried out capacity-building activities to strengthen cold chain logistics and vaccine management by conducting refresher training sessions targeted to specific levels of the cold chain. The training sessions focused on effective vaccine management, with particular attention to the use, response to alerts, and interpretation of data readings of the remote temperature monitoring devices; standard operating procedures (SOPs); roles and responsibilities of vaccine personnel; and maintenance of building and cold chain equipment, among others.
- Reviewed the technical specifications, procurement, and hand-over of an ultra-low temperature (ULT) freezer for mRNA COVID-19 vaccines, as well as 15 ice-lined vaccine refrigerators, which are expected to arrive in the country in March 2022.
- Facilitated discussions with the MoHW and partners, such as the University of Oslo and the Inter-American Development Bank, on immunization information systems and vaccine safety surveillance (ESAVI/AEFI), including the donation of IT equipment and supplies to KHMH and the MoHW.
- Helped coordinate an event with the MoHW and other UN partners for the first arrival of COVID-19 vaccines in Belize, through the COVAX Facility.
- Continued to provide technical cooperation support to the MoHW Vaccination Campaign. Designed and implemented a survey on vaccine hesitancy and carried out a communication campaign.



Bolivia, Plurinational State of



Country-level coordination, planning, and monitoring

- To ensure continuity of the COVID-19 response, provided technical guidance and support to the Ministry of Health and Sports (MSD) to develop the country's 2021 COVID-19 response plan.
- Supported the management and strengthening of the MSD's National Directorate of Epidemiology through restructuring activities to improve the design of policies and strategies for the health system's programs.
- Helped the government coordinate international cooperation, initially by leading working groups in the UN system.
- Strengthened the capacity to respond to the COVID-19 pandemic as part of the Pandemic Influenza Preparedness (PIP) Framework, with a focus on early detection, clinical management, biosecurity, laboratory diagnostics, and epidemiological analysis.
- Initiated coordination efforts to launch two ECHO projects in the department of Santa Cruz aimed at strengthening COVID-19 response in health facilities and vulnerable indigenous communities.



Risk communication and community engagement

- Supported the MSD, the national Expanded Program on Immunization (EPI), and the Vice-Ministry of Communication to design and implement the risk communication and community engagement strategy for introducing multiple vaccines to stop COVID-19.
- Contributed to strengthening the communication capacities of the MSD to improve its stewardship, governance, and leadership in the management of the COVID-19 response and to make progress in COVID-19 immunization by organizing weekly scheduled briefings for the press and positioning guidelines and calls to action.
- Supported the MSD and Departmental Health Services (SEDES) in developing and disseminating risk communication materials to the general public and adapting materials targeting vulnerable groups, Afro-Bolivian communities, and indigenous nations living in the Amazon region, the Chaco, and the valley and highland areas, and worked with multimedia to promote vaccination among the Takana, Cavineño, and Esse Ejsja indigenous peoples.
- Disseminated messages through social networks designed to address variants of the SARS-CoV-2 virus and promote self-care and social distancing measures.

- Forged strategic alliances with the UN Communication Group in Bolivia to develop a vaccination promotion campaign, using songs, video clips, and influencers; promoted a virtual dialogue with immunization experts to counter myths about vaccines.
- Supported the preparation of two citizen perception studies in urban and rural areas to identify behaviors, attitudes, and practices regarding the COVID-19 vaccine. These studies were useful for retargeting the actions of the national EPI and strengthening communication with the public.
- Implemented a project to combat the infodemic in partnership with the Journalism Foundation, which included designing educational materials for the public, identifying more than 420 “fake news” pieces, and building the capacity of 160 reporters in the national press.
- Strengthened risk communication capacities by developing a diploma course in health in the context of the pandemic and training 35 government communicators and journalists.
- Provided technical support for the monitoring and contact tracing of COVID-19 cases and facilitated a training and risk communication project in Guaraní-speaking indigenous communities in the department of Santa Cruz, in partnership with the Tekove-Katu Technical Health School in the region of the Bolivian Chaco.
- Strengthened the epidemiological surveillance unit by providing IT equipment, training officials in the epidemiological analysis of SARS-CoV-2 using interactive epidemiological analysis tools, and donated epidemiological analysis software licenses.
- Supported development of the Field Epidemiology Diploma Course to train medical professionals at the first level of care who are part of the epidemiological surveillance rapid response teams addressing the COVID-19 pandemic.
- In response to the second and third waves of COVID-19, supported community surveillance by deploying nearly 450 volunteer doctors throughout the country for case investigation, isolation of positive cases, and training in biosafety measures.



Surveillance, rapid response teams, and case investigation

- Collaborated in the implementation of telehealth-based strategies to promptly identify cases and contributed to the development of follow-up tools for rapid response teams.
- Provided technical assistance to the Health Disasters and Emergencies Unit to strengthen the Regulatory Centers for Medical Emergencies (CRUEM) at the national level by strengthening the epidemiological information system and monitoring the needs of health services (beds, oxygen, ambulances, etc.).
- Collaborated with the National Liaison Center in the periodic reporting of information on COVID-19, in line with the International Health Regulations (IHR).



Points of entry, international travel, and transport

- Fostered coordination among national authorities: epidemiology; civil aviation; airport authorities; and SEDES to implement safety measures and protocols for air transport, both for ground and in-flight services.
- Supported SEDES in decision-making for land and river border control and closure related to points of entry, under the IHR.
- Supported the implementation and strengthening of the technical secretariat of the national strategic health emergency council, under the provisions of Law 1359, as well as the design of the National Strategic Council regulations under the Emergency Law.

- Promoted the development of the Rapid Response Plan, the formulation and validation of rapid response plans for borders areas and air terminals, and ongoing monitoring of the epidemiological situation at these points of entry.



National laboratories

- Supported the MSD in preparing a request for funding for the purchase of rapid antigen diagnostic tests and viral extraction kits, among other items.
- Mobilized the donation of 50,400 laboratory kits to meet the exponential demand for COVID-19 diagnostic tests.
- Supported genomic surveillance for SARS-CoV-2 by donating 20,000 PCR-Rt tests to detect Alpha, Beta, and Gamma Variants of Concern (VOC), as well as the genomic sequencing of SARS-CoV-2 by providing supplies and reagents and the diagnostic protocols of PAHO's reference laboratory in Brazil used to identify new VOC and VOI through the INLASA national reference laboratory.
- Supported Bolivia's access to the genomic surveillance network of the Americas and obtained results on the circulation of new VOC, diagnosed in PAHO's collaborating centers (FioCruz in Brazil and the Gorgas Institute in Panama). This enabled the INLASA and CENETROP laboratories to use the influenza data collection platform for the genomic surveillance of SARS-CoV-2 to obtain accurate and timely data on the epidemiology of new VOC in circulation.
- Collaborated with external quality control of the 10 public laboratories that diagnose SARS-CoV-2 through PCR-Rt tests, in close coordination with CENETROP.
- Donated rapid antigen, reagent, and primer tests for implementation of joint surveillance of influenza and COVID-19, primarily in the country's SARI sentinel hospitals.



Infection prevention and control and protection of the health workforce

- Trained health personnel at the primary, secondary, and tertiary levels of care in infection prevention and control through two virtual modules designed for that purpose.



Case management, clinical operations, and therapeutics

- Provided a 23-hour virtual training to 320 general practitioners and nurses countrywide on theoretical and practical concepts of conventional and high-flow oxygen therapy, in coordination with the Peruvian Ministry of Health, as well as to 120 health professionals at secondary and tertiary hospitals in the management of AirVo2 high-flow oxygen therapy equipment. Also coordinated training with the MSD and UNDP on the use of 150 high-flow oxygen therapy devices purchased by this program.
- Provided 20 high-flow oxygen therapy devices and 400 high-flow nasal cannulas to four hospitals and supplied 6,784 Venturi masks, 16,195 reservoir bags, and 50 oxygen concentrators for use at primary care health facilities (comprehensive health centers) and secondary care hospitals.
- Strengthened the capacities of an MSD team and teams from other institutions involved in the management and training of human resources for health through a specialized virtual course, in coordination with the Andean Health Organization (ORAS/CONHU), to improve health access and coverage and reduce the pandemic's impact on highly complex health facilities.
- Supported a study on the impact of COVID-19 on human resources for health and policy response to identify, analyze, and quantify the multifaceted impact of COVID-19 on human resources for health in Bolivia, Chile, Colombia, Ecuador, and Peru.



Operational support, logistics, and supply chain

- Coordinated a study to measure the availability of tracer medicines in primary and secondary health care facilities. Based on the results of this analysis, national authorities can propose or take corrective measures to improve access to medicines.
- Supported the State Agency for Medicines and Health Technologies (AGEMED) to update the National Essential Medicines List (LINAME) and the National Medical Devices List (LINADIME) to improve access to quality medicines and medical devices.
- Through PAHO's Strategic Fund, supported MSD in the procurement of medicines for critical COVID-19 patients (fentanyl, propofol, morphine, and midazolam). Obtained 150,000 rapid antigen test kits through the Strategic Fund.
- Helped the Center for Health Provisions and Supplies (CEASS) improve its information system, logistics management processes, and an in-person process for sharing experiences with Nicaragua's Ministry of Health in the areas of strategic planning, logistics management (inventories, warehouses, distribution), information systems, and improving technological and management capacities.
- Supported the recruitment of approximately 140 technicians to implement the national pandemic plan.
- Facilitated the emergency delivery of 70 tons of liquid oxygen in response to acute shortages of oxygen in June 2021.
- Helped adapt the health services to the new context by providing technical support to update the national standard for health networks and formulate the hospital management model.
- Promoted inter-agency agreements to strengthen the skills and knowledge of primary care health personnel in the department of Cochabamba, with a focus on improving response capacity and the management of noncommunicable diseases.
- Systematized the indirect effects of COVID-19 on essential health services for women, pregnant women, newborns, children, adolescents, and older persons. Provided support to develop a national framework for obstetric emergencies, neonatal care and neonatal emergencies, congenital guidance, and the Intercultural Birth Guide (focusing on pregnancy, birth, and puerperium) to protect maternal and child health despite the ongoing pandemic; and a guide for midwives to strengthen knowledge dialogues that integrates all the different socio-cultural expertise and practices of women, midwives, and providers of intercultural birthing services.
- Trained 140 health managers in the national system on the subject of knowledge dialogue to strengthen their competencies in intercultural health.
- Worked with the Community and Intercultural Family Health Program (SAFCI) to develop a virtual education model on the Moodle platform, with virtual interactive modules on obstetric emergencies, congenital syphilis, and newborn care, combining this strategy with in-person workshops.
- Strengthened the MSD's Continuum of Care area and 10 comprehensive adolescent care centers (AIDA).



Maintaining essential health services during the pandemic

- Provided technical cooperation to establish new hospital capacity for COVID-19 and non-COVID-19 patients.
- Helped improve the management model by updating the guide on the roles and responsibilities of social health councils (COSUMUSA) and local health committees (COLOSAS), in connection with the "leave no one behind" right to health, emphasizing the importance of women's participation and the defense of sexual and reproductive rights.


- Fully supported the National Noncommunicable Diseases Program in the implementation of the HEARTS initiative in 72 primary health care centers located in four departments: Tarija, La Paz, Santa Cruz, and Oruro, and promoted the development of the online and mobile platform for managing the Diabetes and Hypertension Registry and completing round two of the Telephone Survey on the Impact of COVID-19 on Mental Health and Noncommunicable Diseases in Bolivia, 2021.
- Supported the MSD in implementing systematic assistive technology capacity assessment (ATA-C) of rehabilitation and the capacities of supporting technologies; preparing the first draft of the national strategic plan on Rehabilitation and Assistive Technology 2022–2025 (MSD and other ministries); preparing the first bulletin on the National Single Registry Program for Persons with Disabilities (PRUNPCD); and promoting closer work with the Ministry of Justice’s Vice Ministry of Equality and Opportunities for strengthening multisectoral activities on disabilities.
- Assisted the MSD in implementation of the comprehensive care model for victims of sexual violence in the context of COVID-19, and in the development of a national interagency technical roundtable on health, violence, and trafficking.
- Promoted implementation of cervical cancer prevention, care, and control strategies in the departments of Pando and Potosí, as well as pediatric cancer nationwide.
- Supported the National Comprehensive and Community Mental Health Care Network (RENASMIC) to expand and monitor the mhGAP initiative for doctors in the SAFCI program and the Short-Term Social Security Supervisory Authority (ASUSS); also provided training to identify and manage problematic substance use in the health services network and implement early detection and brief interventions to reduce consumption.

- Provided scientific technical support to develop the National Mental Health Plan and respond to MHPSS needs during COVID-19 in indigenous and Afro-descendant communities in Bolivia.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Provided technical and financial cooperation to develop the 2021 national COVID-19 vaccination management plan and subnational deployment plans for each new vaccine and for groups prioritized according to vulnerability.
- Facilitated implementation of the Electronic Vaccination Registry (RNVe) for traceability, daily monitoring, and evaluation of COVID-19 vaccination.
- Promoted microplanning and the monitoring of complementary strategies with subnational authorities.
- Cooperated to maintain trust in vaccines by implementing active and passive surveillance of adverse events following immunization (AEFI): recording AEFIs in the RNVe; releasing a new AEFI surveillance guide; strengthening sentinel surveillance in two selected hospitals with an AESI baseline; and preparing procedural manuals for expansion in 2022.

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- Facilitated governance of the vaccination plan by setting up technical committees for AEFI surveillance, technical management, and information systems at the national and departmental levels.
 - Facilitated a self-assessment of the national vaccination plan using the VIRAT tool.
 - Facilitated the post-introduction evaluation of COVID-19 vaccines (Mini-cPIE), to be used to formulate a new COVID-19 vaccination plan for 2022.
 - Supported strengthening of the cold chain through the development of joint projects with international partners and donors and the provision of equipment for national and departmental warehouses: cameras, digital temperature monitoring devices, and mechanical loading equipment, in addition to providing personal protective equipment for handling vaccines at low temperature.
 - Worked on updating EPI technical standards, planning on- and off-line self-learning courses, and promoting frequent training on the proper handling of ultra-low temperature vaccines.
 - Increased access to vaccination through the work of 1,360 vaccination and supervision teams in prioritized municipalities in the nine departments.
 - Promoted access to COVID-19 vaccines in cross-border indigenous communities in countries of the Andean Community (CAN), with a focus on the Cavineña, Esse Eja, and Takana communities in the department of Pando, mobilizing resources from UN agencies, funds, and programs in Bolivia.



Brazil



Country-level coordination, planning, and monitoring

- Prepared daily COVID-19 situation analyses and disseminated them to the Ministry of Health (MoH), local health authorities at the federal and state level, and other relevant sectors, including but not limited to health councils, legislators, and scientific societies.
- Supported the strengthening of partnerships between the MoH and state and municipal health secretariats for COVID-19 preparedness and response. Supported coordination of the response with civil society through the National Council of Health Secretariats (CONASS) and the National Council of Municipal Health Secretariats (CONASEMS). Coordinated COVID-19 response efforts with other UN agencies and international organizations, such as Doctors Without Borders, to support vulnerable populations, including indigenous, coastal, and isolated communities, especially in the Amazon region.
- Provided technical support to update and implement Brazil's emergency plans and protocols to improve COVID-19 national readiness.
- Supported the subnational levels to assess risk and define and monitor the implementation of public health measures.
- Translated 330 WHO and PAHO COVID-19 publications and tools into Portuguese; these are available on PAHO's website, and this information was shared with all states.
- Provided ongoing technical support to the Special Secretariat for Indigenous Health, preparing a weekly Epidemiological Bulletin on COVID-19, focused on the country's indigenous populations.
- Helped to implement indigenous primary health care units. These units relied on technology, using telemedicine for consultations and point of care diagnoses.
- Formalized technical cooperation agreements with national and subnational levels to strengthen health surveillance actions and strategies, including but not limited to COVID-19 preparedness and response.
- Supported the design and analysis of surveys conducted by the MoH and research institutes on COVID-19 among persons deprived of liberty; developed a tool to be used by the National Council of Justice to improve decision-making.
- Conducted joint external evaluations to assess COVID-19 response and exchange best practices and lessons learned in 16 states, covering more than 50 municipalities. This facilitated the dissemination of best practices, supported the implementation of a more coordinated response, increased integration between states and municipalities, and strengthened local initiatives. Facilitated the exchange of experiences between Brazil and other countries on COVID-19 response and control activities.
- Supported the establishment of the Unified Health System (SUS) Strategic Information Center for State Management (CIEGES) to develop information

dashboards at the subnational level. CIEGES provided state health authorities with data and indicators about the size and composition of the SUS workforce, including numbers and costs related to human resources. This promoted transparency and made strategic information available to improve decision-making planning, budgeting, and financial decisions.

- Supported the organization and coordination of genomic surveillance networks, laboratory networks, and research networks through the facilitation of meetings and workshops to exchange experiences and identify strengths and opportunities for improvement at the municipal and state level.
- Conducted 163 on-site in-action reviews in 26 states, together with the MoH and the Health Secretariats, to support COVID-19 response at subnational levels. From January 2020 through December 2021, 202 technical missions were carried out.
- Supported the states directly by providing qualified health professionals to alleviate shortages and the pressure on hospitals, especially in the most vulnerable regions of Brazil.
- Supported partnerships and provided technical inputs for the work of the MoH, state and municipal health secretariats, research institutes, and universities to improve the understanding of COVID-19 and SARS-CoV-2 variants in Brazil.
- Generated knowledge through the publication of studies that could be rapidly incorporated and disseminated at the various levels of local health services management.



Risk communication and community engagement

- Carried out an intra-action review of the state and municipal response in the area of communications, with a special focus on risk communication.

- Collaborated with the MoH and the subnational level to develop best practices and targeted communication plans related to:
 - Contact tracing, including technical support for a national course to train staff in COVID-19 contact tracing, monitoring strategies, and in the National Plan for Expansion of Testing;
 - Implementation of disease prevention measures (in the states of Amapá, Pará, Pernambuco, Rio Grande do Norte, and Rio Grande do Sul);
 - Communication strategies to increase vaccination coverage in selected municipalities (states of Acre, Amapá, Amazonas, Pará, Pernambuco, Rondônia, Roraima, and Tocantins).
- Produced evidence-based communication materials; disseminated information to different target audiences via social media and other platforms; worked with the media to provide accurate information; and reviewed and debunked false information and unfounded rumors related to COVID-19, using WHO's Epidemic Intelligence from Open Sources (EIOS).



Surveillance, rapid response teams, and case investigation

- Conducted a daily analysis of the COVID-19 epidemiological situation in Brazil; shared this analysis with the MoH, the Brazilian Intelligence Agency (ABIN), CONASEMS, and CONASS, to be forwarded to all health secretariats (with incidence curves and tables and information on hospitalizations, mortality, vaccination, and SARS-CoV-2 variants).
- Strengthened the surveillance and response capacity of the MoH and Subnational Strategic Health Surveillance Information Center (CIEVS), including:
 - Training in analysis and preparation of dashboards to monitor and analyze indicators and make projections that support government decision-making;

- Increasing the workforce;
- Training health professionals on risk assessment and response.
- Collaborated with various states to develop their own dashboards and databases for dissemination of epidemiological information.
- Continued to train staff from the MoH countrywide on the use of Go.Data for contact tracing.
- Provided training and other technical support to strengthen local capacity in surveillance; health care; crisis management; analysis of the health situation; and forecasting in the states of Amazonas, Amapá, Goiás, Pará, Pernambuco, Roraima, Rondônia, Rio de Janeiro, and Santa Catarina.
- Supported setting up the Emergency Operations Center to conduct epidemiological analysis and automate its COVID-19 epidemiological bulletin in the municipality of Rio de Janeiro and the states of Pará and Santa Catarina.
- Supported the MoH and other Brazilian institutions in the design and implementation of a national sero-epidemiological study to determine the prevalence of SARS-CoV-2 infection in Brazil. At the subnational level, supported a seroprevalence survey in the state of Pernambuco.
- Supported the MoH and other national actors in six states to design and implement epidemiological studies to understand the incidence, magnitude, and patterns of transmission, reinfection, and severity of different strains and variants of SARS-CoV-2, in both the general population and specific populations (pregnant women, newborns, older persons, etc.).
- Assisted the MoH in the preparation of technical notes on cases and fatal case outcomes of Variants of Interest and Concern and in the definition of criteria for the surveillance of pediatric multisystemic syndrome related to COVID-19.
- Supported the genomic surveillance network to develop strategies and strengthen human resources for the identification of circulating strains, especially Variants of Concern (VOCs). Provided daily updates

to the MoH with data on the genomic surveillance of strains circulating in Brazil.

- Increased the number of professionals to strengthen primary health care, laboratory capacity, surveillance, genomic surveillance, research, and infrastructure. Since the pandemic began, and as of 31 December 2021, 1,081 professionals had been hired.
- Conducted an analysis of deaths and live births in Brazil from official national databases in order to understand the impacts of the COVID-19 pandemic.
- Collaborated in analyses of excess mortality and gaps in health care due to the COVID-19 emergency.
- Developed and improved forecasting models for estimating COVID-19 cases, hospitalizations, fatal cases, and hospital needs.
- Prepared and carried out an online course on Health Situation Analysis in the context of COVID-19, directed at managers and technicians from the municipalities of all states, in partnership with CONASEMS.
- Supported implementation of event-based surveillance and the EIOS platform at the national and subnational level in Brazil and trained 356 health professionals from the MoH, ANVISA (Brazilian Health Regulatory Agency), Civil Protection and Municipal and state Health Secretaries of all 27 states.
- Collaborated on a countrywide training course for 114 state surveillance technicians to implement the COVID-19 contact tracing strategy and the National Plan for Expansion of Testing.



Points of entry, international travel, and transport

- Collaborated with the MoH to develop, adapt, and implement guidelines and protocols on surveillance at borders.
- Supported the Oswaldo Cruz Foundation and the MoH in reorganizing the education program on health surveillance to address needs at the border.

- Supported the MoH in strengthening information management and health surveillance in selected border municipalities.
- Supported surveillance at points of entry with Argentina, Bolivia, Colombia, French Guyana, Guyana, Paraguay, Peru, Uruguay, and Venezuela.



National laboratories

- Supported the states of Amapá, Maranhão, Pará, Rondônia, and Roraima to improve their capacity to diagnose SARS-CoV-2 infection by donating rapid antigen-based tests (Ag-RDT).
- Strengthened implementation of the Ag-RDT diagnosis strategy by helping to prepare protocols and developing and disseminating instructional videos on the use of these tests, in partnership with the MoH and states.
- Supported the Central Public Health Laboratory of Amazonas (LACEN) to create automated routines to quickly analyze the situation and improve the recording of results in the information system; expanded staff to allow for 24/7 operations.
- Provided health authorities in Amazonia with rapid antigen-based tests for COVID-19 diagnosis and oximeters for silent hypoxemia monitoring in patients.
- Supported laboratory systems in the use of RT-PCR for COVID-19 diagnosis in the state of Amazonas and increased the number of professionals working in state laboratories.
- Supported the creation of border laboratories in the states of Amapá (municipality of Oiapoque, bordering French Guiana) and Amazonas (municipality of Tabatinga, border with Colombia and Peru).
- Delivered molecular detection material and laboratory supplies (swabs, primers, probes, plastic materials, etc.).

- Supported the sequencing of approximately 410 samples of confirmed COVID-19 cases, collected from eight state collection sites, to understand the evolution of the pandemic and behavior of the variants.
- Maintained a sentinel network of acute febrile outbreaks through the REPLICK network in eight Brazilian cities, conducting a study of the history of SARS-CoV-2 infection.



Infection prevention and control and protection of the health workforce

- Together with the MoH, trained more than 149,000 health professionals in IPC.
- Provided support in developing protocols to mitigate the risk of transmission in health services.
- Provided technical training on COVID-19 infection prevention and control for the UN teams based in the Amazon region of Brazil.



Case management, clinical operations, and therapeutics

- Supported the states in organizing the flow of health care, not only for patients with COVID-19 but also for patients who require medical and hospital care for other pathologies, aiming to reduce the risk of nosocomial transmission.
- Provided technical guidance to health services in the states in the Amazon region of Brazil to avoid an outbreak of COVID-19 in health services, including hospitalization cases.
- Provided continuous training to health professionals in prevention measures for respiratory infections, including COVID-19.
- Provided guidance on ensuring the sufficient availability of beds in the face of the risk of increased SARI cases, including among the pediatric population.

- Elaborated guidelines for the states in the Amazon region on replenishment of hospital supplies in view of the risk of a new increase in hospitalizations for SARI.
- Supported the states in developing contingency plans for an increase in cases of SARI. Provided guidance on testing, clinical management, and the use of medications in the face of the co-circulation of influenza and SARS-CoV-2, based on updated scientific literature.
- Supported the organization of neuromotor rehabilitation and cardiopulmonary services and the implementation of mental health strategies, to provide adequate care for post-COVID-19 conditions.
- Collaborated in training more than 13,900 health professionals in the clinical management of COVID-19.
- Deployed antigen-based rapid detection tests to several state health departments, aiming to decentralize testing and increase the capacity for case management in remote regions and among vulnerable populations.
- Coordinated with 53 hospitals to participate in WHO's Global Clinical Data Platform COVID-19, which collects anonymous clinical data related to suspected or confirmed COVID-19 hospitalizations.
- Worked with the MoH and state and municipal health secretariats to conduct online training courses on COVID-19 case management (17,944 professionals trained) and online training courses on infection prevention and control (22,874 professionals trained).
- Supported the MoH in conducting an assessment of pharmaceutical assistance to contribute to the improvement of the National Program for the Qualification of Pharmaceutical Assistance in SUS.
- Supported the implementation of the care of units for post-COVID-19 conditions in Amapá, Amazonas, Mato Grosso do Sul, and Pará.
- Supported the National SUS Force to develop courses on strategies to respond to disasters during the COVID-19 pandemic.

- Supported the preparation of flows, guidelines, and protocols for clinical management and laboratory diagnostics.



Operational support, logistics, and supply chain

- Coordinated the purchase, donation, and delivery of rapid diagnostic tests, hospital equipment, PPE, swabs, and other laboratory supplies, medical oxygen, oxygen concentrators, pulse oximeters, and medicines and supplies for critical patient care.
- Supported CONASS in setting up situation rooms in the 27 federal Strategic Information Centers and a situation room in the Central Office.
- Provided support to address the logistics of patient transfers and the procurement and reorganization of supplies.
- Provided technical guidelines on the use of hospital equipment (such as oxygen compressors), rational use of medical supplies, and the flow of medical referrals and counter-referrals.
- Supported the organization of the VI National Meeting of the CIEVS Network and I Public Epidemiological Emergencies Simulation Exercise in November 2021.
- Supported the organization of the "Border Vaccination Strategy" launch event with the MoH, State Health Secretary of Paraná, and Municipal Health Secretary of Foz do Iguaçu.



Maintaining essential health services during the pandemic


- Systematized primary health care best practices, which provided important resources for national SUS managers.
- Developed training programs for health professionals on PPE, clinical management, and mental health; in coordination with the network of university hospitals,

used simulation exercises to train health care workers prior to deployment, especially to Amazonas.

- Together with WHO and international partners, worked on a project to identify the indirect effects of COVID-19 on essential health services for pregnant women, newborns, adolescents, and older persons in three municipalities.
- Developed technical guidance for the management of patients under 10 years of age with multisystem inflammatory syndrome (MIS-C).
- Participated in the design and production of instructional videos for adolescents and young people with health questions about the COVID-19 pandemic.
- Collaborated in the publication “Recommendations for health professionals for treatment of COVID-19 in pregnant women and those who have recently given birth.” Produced 16 video classes to support the publication.
- Supported the WHO-led study, “Definition and categorization of the timing of mother-to-child transmission of SARS-CoV-2.” Contributed to the planning of the second phase of the study.
- Helped issue a national call for best practices, under the banner “Strong Primary Health Care in the fight against the pandemic,” so that the best practices of primary health care teams would receive widespread recognition. Information on over 1,600 experiences was disseminated and the broadcasts reached more than 60,000 people, including health professionals and health sector managers.
- Supported the development of a specific line of care for COVID-19. An infographic supports managers, workers, and health teams in responding to the needs of patients during the pandemic.
- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Worked with the MoH to design and implement a national COVID-19 vaccination plan. Supported 27 states in developing state-level immunization plans. This involved technical information and research on adverse events following immunization.
- Supported the implementation of a national technical group to discuss the purchase of COVID-19 vaccines, syringes, and other items needed for the vaccination campaign.
- Supported the national immunization program in the MoH to implement the COVID-19 Vaccine Introduction Readiness Assessment Tool (VIRAT).
- Supported the recruitment of technical human resources in all 27 states to provide services, monitor vaccine-preventable diseases, and support national vaccination programs and laboratory surveillance.
- Supported the MoH in developing protocols for monitoring events supposedly attributable to COVID-19 vaccination.



Vaccination

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- Designed 12 epidemiological studies to evaluate the efficacy of the vaccine in health care professionals and older persons; assess immune response by comparing vaccinated people with COVID-19 patients; and detect new variants and Variants of Concern (VOC) in patients with the SARS-CoV-2 virus.
 - Supported the Central Crisis Management Committee in Amazonas to:
 - Implement the immunization plan, with technical information on logistics, supply procurement, and guidance on post-vaccine adverse events.
 - Implement a computer platform to record vaccination data with individual identification and ESAVI registration.
 - Create a panel to monitor vaccine distribution.
 - Analyzed and published a WHO epidemiological record with good practices identified in the indigenous population's vaccination strategy.
 - Supported the state of Pernambuco in the analysis and interface of information systems to identify priority areas to reinforce vaccination and actively search for unvaccinated segments of the population.



Chile



Country-level coordination, planning, and monitoring

- Collaborated with national authorities to develop and implement Chile's COVID-19 action plan, adapting PAHO and WHO protocols and methodologies to the country context.
- Met periodically with national authorities and technical staff from the Ministry of Health (MoH) to deliver recommendations on matters such as the presentation of statistical information; incorporation of Go.Data in epidemiological surveillance; COVAX; the Paso a Paso (step by step) plan; the country's "Mobility Pass"; coding of COVID-19 cases and deaths, the nowcasting methodology; and Residencias Sanitarias (approved quarantine/isolation quarters).
- Delivered periodic recommendations to the Security Management Team (SMT) of the UN system in Chile to improve compliance with public health measures and support the production of communications for all Chile-based personnel, in the context of changing measures instituted by the MoH, the movement between phases of the Paso a Paso plan, and the national clinical and epidemiological situation.
- Facilitated interagency discussions (UNESCO, UNICEF, ILO, UN Resident Coordinator) on the reopening of schools and participated in UNSC working groups to support efforts to mobilize resources and ensure a role for health in the plan for socioeconomic response to the pandemic.
- Facilitated MoH participation in the opening session of the Global Summit on Public Evidence and Policies (more information [here](#)). In addition, facilitated the country's participation in the subregional technical consultation about the impact of COVID-19 on indigenous peoples and the APEC virtual consultation on rare diseases and COVID-19.
- Coordinated and participated in a meeting of the President of Chile and the Executive Director of the WHO Health Emergencies Program to discuss questions involving genomic surveillance and the Delta variant, contact tracing, use of technologies, and border reopening and control. More information [here](#).
- Facilitated the participation of the WHO Director-General and the PAHO Director in the virtual panel "Building a More Just, Equitable, and Healthy World after COVID-19 in the Region of the Americas," held as part of World Health Day and organized by the President of the Republic (more information [here](#)).
- Participated in the Jornada de Escucha Ciudadana (campaign for listening to the public) in relation to the Paso a Paso plan and the COVID-19 vaccination process managed by the MoH.
- Along with the MoH, validated the report of the Chilean case study on the impact of COVID-19 and the response that unfolded in the context of human resources for health policies. The study was conducted with support from WHO and the PAHO Subregional Program for South America.

- Provided technical support for review of the MoH National Migration and Health Survey and the Survey on the Needs of Venezuelan Migrants in Chile, both conducted in the context of COVID-19.



Risk communication and community engagement

- Conducted various communication campaigns in conjunction with the MoH and other relevant organizations for the purpose of COVID-19 prevention and to maintain health programs: [campaign](#) to promote care and prevention of STIs, HIV, and COVID-19 in young people and adolescents; “Para estar como lechuga en la feria”--“Like lettuce at the market,” a communication campaign by market vendors to maintain safe, uninterrupted operation of the country’s open-air markets and prevent COVID-19 contagion (press release [here](#)); communication campaign with UNICEF targeting young people to increase COVID-19 prevention measures and promote awareness about the importance of health measures; and campaigns to maintain health promotion and disease prevention programs in the COVID-19 context ([here](#)).
- Organized and participated in a number of workshops and strategies: the “Brigadas de Salud” (health brigades) strategy; a dialogue on community participation experiences during the pandemic as part of the series “Diálogos en APS” (PHC dialogues), along with the PHC community of practice (more information [here](#)); joint presentation with the MoH of the national strategy “Cuadrillas Sanitarias en tu Barrio” (neighborhood health teams) for community-based prevention of COVID-19 (more information [here](#)); commemoration of the Sixth Global Road Safety Week in Chile along with the National Traffic Safety Commission (CONASET) in the context of the COVID-19 pandemic (press release [here](#)); workshop on strengthening COVID-19 prevention measures in open-air markets, offered for previous training course participants in coordination with ASOF, the market vendors’ organization, the University of Chile

School of Public Health, and FAO; workshop for HIV and STI prevention in the context of the pandemic, addressing the situation of imprisoned trans women in the Valparaíso Region; and workshops to strengthen civil society organizations in the context of the pandemic to support COVID-19 and HIV/STI prevention for persons imprisoned in different regions of the country.

- Organized and participated in various national and international seminars: Ibero-American Program (PIAM) Seminar on the situation of older persons in the Region, whose objective was to share COVID-19 mitigation strategies and provide an update on the situation of older persons in Ibero-America; virtual seminar on risk communication, organized by the Regional Office; and regional online seminar on the management of critical-care patient units one year into the pandemic.
- Organized and provided technical support to the UN system in Chile at town hall meetings in order to strengthen risk communication and measures to prevent COVID-19 contagion. Also headed a workshop on COVID-19 prevention in fieldwork for UN Security Council personnel.
- Conducted activities within the PAHO/WHO team in Chile to support the mental health strategies of the staff and plan wellness activities for the team.



Surveillance, rapid response teams, and case investigation

- Supported the definition of criteria for COVID-19 surveillance and the corresponding reporting of cases and deaths through global and regional data platforms. In addition, facilitated the meeting between PAHO and MoH experts on the International Classification of Diseases to share information and address questions about the classification of deaths associated with COVID-19.
- Collaborated with the Global Outbreak Alert and Response Network (GOARN) to train country

counterparts in adopting Go.Data for contact tracing. Also supported the implementation of Go.Data in the country through follow-up missions and plans for interoperability with national surveillance systems.

- Facilitated the presentation of Chile's contact tracing experience in its testing, traceability, and isolation strategy at the GOARN Consultative Meeting.
- Supervised and shared information on the circulation of SARS-CoV-2 variants. Alerted national authorities about variants of interest and provided recommendations on strengthening genomic surveillance.
- Facilitated the country's participation in the pilot contact tracing workshop organized by Headquarters, WHO, and CDC with the participation of the MoH at the central national and local levels.
- Facilitated the participation of country experts in the workshop on adopting contact tracing guidelines in the Americas.
- Facilitated the incorporation of SARS-CoV-2 in SARS sentinel surveillance at the national level, and the monitoring of vaccination effectiveness through REVELAC-i/SARINET.
- Collaborated with the national regulatory authority in planning and conducting training on vaccine pharmacovigilance for health professionals.
- Held a meeting of the regional REVELAC-i/SARINET team (PAHO and CDC) and the appropriate national officials for surveillance of influenza and other respiratory viruses, with a view to expanding work with the country to evaluate the effectiveness of COVID-19 vaccines. In addition, conducted missions to verify capacities and implement the REVELAC project to evaluate the effectiveness of COVID-19 vaccines, with the support and participation of the regional project head, the MoH, and the Institute of Public Health (ISP).



Points of entry, international travel, and transport

- Participated in an intersectoral roundtable on the International Health Regulations (IHR), communicated the global recommendations, and followed up on the measures adopted at points of entry into Chile. Provided recommendations on the reactivation of non-essential international travel.
- Met with national health and aeronautical authorities to discuss the resumption of non-essential domestic and international flights and provide recommendations.
- Participated in monthly meetings of the IHR team, together with other sectors of interest (armed forces, police, foreign relations, etc.), to monitor progress and make recommendations.
- Conducted an interagency mission to the country's northern area to learn about the migration and health situations of people entering the country irregularly in the context of COVID-19 and provided support for the preparation of a report and action plan.
- Conducted a visit to verify capacities at points of entry in three regions, Arica/Parinacota, Aysén, and Tarapacá, in relation to the International Health Regulations and COVID-19, working with a team from the MoH and using an evaluation tool at land, sea, and air border crossings.



National laboratories

- Trained the national reference laboratory team to adopt the recommended technique for diagnosing COVID-19 using RT-PCR.
- Supported the procurement of equipment and supplies for laboratory surveillance at the national reference center.



Infection prevention and control and protection of the health workforce

- Held technical meetings with the MoH and PAHO focal points to make recommendations on the use of PPE in relation to SARS-CoV-2 transmission mechanisms and community protection measures.
- Trained UN staff in Chile on IPC in everyday situations.
- Conducted two trainings on COVID-19 prevention measures for leaders of open-air markets in Chile in 2020 and 2021.



Case management, clinical operations, and therapeutics

- Delivered therapeutic supplies and provided technical support to the MoH to improve case management, as well as access to PAHO clinical management guidelines, online training resources, and virtual meetings.
- Facilitated the participation of Chilean experts in the regional webinar on clinical case management.
- Made a support visit to San José Hospital with the National Coordinator for the Integrated Management of Critical-care Beds to ascertain the situation and see how the expansion of the health services response capacity was being organized.
- Facilitated the meeting of the MoH National Coordinator for the Integrated Management of Critical-care Beds with the Health and Emergency Services team at the regional level in order to access the statistics on the use and expansion of critical-care beds in the Region.
- Promoted the country's participation in the WHO Solidarity clinical trial for COVID-19 treatments.

- Facilitated the participation of the Universidad de la Frontera and its receipt of a grant for adapting the generic WHO protocol on the effects of COVID-19 on pregnancy, and for participating in a multicenter study.




Operational support, logistics, and supply chain

- Supported purchases of laboratory supplies through PAHO's Strategic Fund and local purchases using emergency funds.
- Donated 26 laptops with permanent Microsoft Office licenses to the National Immunization Program of the MoH. They were distributed in regions and at the central office to support the recording of COVID-19 vaccination. In addition, donated video conferencing equipment (including television), external hard drives (15), individual listening devices (40), tablets (210), and clinical refrigerators (34) with infographics on vaccine storage to support COVID-19 vaccination.



Maintaining essential health services during the pandemic

- Organized intercountry exchanges of experiences involving the safe resumption of elective surgeries.
- Used public communications, dialogues with academic institutions, and conferences with health service managers to underscore the importance of maintaining essential health services, with emphasis on the primary care level. In addition, provided psychological and emotional support for primary health care teams involved in the pandemic response.
- Collaborated in developing a model for prioritizing and managing demand at the primary care level, and for implementing PHC in 10 facilities through the Teletriage in Primary Health Care project. The



Teletriage project is a model that seeks to improve health care and make it more accessible to the users of primary health care facilities through an online digital system for requesting appointments, setting priorities, assigning care activities according to need, and solving problems through remote and in-person care. As part of the project, equipment was delivered to 10 family health centers (CESFAM) in the Metropolitan Region. In the closing seminar of the Teletriage in Primary Health Care project, the 10 participating family and community health centers of the Southern Metropolitan Health Service shared their results. Learn more at www.teletriage.cl.

- On the mental health front, provided support for designing the SaludableMente program to provide information to improve mental health and psychological/social well-being through coordinated actions, including widespread access to virtual psychotherapy. In addition, facilitated a virtual technical visit by the Brazilian Ministry of Health to its Chilean counterpart to learn from Chile's experience in implementing the program and preventing suicide in the context of the pandemic; participated in the Mesa de Seguimiento de la Estrategia de Salud Mental (program for monitoring mental health), which deals with older persons and their support settings; and conducted two sessions of the dialogue on psychological/emotional support for PHC teams, the role of management, and the organizational dimension during the COVID-19 pandemic. More information [here](#).
- In conjunction with the Community of PHC Practices, organized the discussion "Atención Centrada en la Persona y Su Familia, experiencias de la respuesta de la APS a la Pandemia" (Person- and family-centered care, PHC experiences in response to the pandemic). More information [here](#).
- In the context of the country's migrant situation, supported a study to understand the migration situation in the country and the needs of migrant populations in the country's northern area; supported the generation of evidence for biopsychosocial actions


in the most affected areas, an action that supports the management of health teams who provide guidance to migrant populations on access to health services; and hired professionals to support the MoH in improving access to health care for migrants. Finally, a joint PAHO-MoH mission was conducted to evaluate the situation and action taken and to improve gaps in care for irregular migrants in the northern part of the country in the context of COVID-19.

- Managed Chile's presentation at the seminar for the regional report on the second round of the Pulse survey on the continuity of essential health services during the COVID-19 pandemic. This included a presentation on the Teletriage in PHC projects implemented by PAHO and other partners at the primary care level as part of a panel on the experiences of the Region's countries in implementing mitigation measures.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Facilitated and participated in technical meetings between the MoH Immunization and Information and Communications Technology (ICT) teams and PAHO, as part of the review of a survey on AEFI surveillance information systems and development of the regional plan for the safety of COVID-19 vaccines.

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- Held a meeting with the Undersecretary of Public Health and the MoH team to review implementation of the vaccination plan in Chile and its future. In addition, convened the MoH ISP and immunization teams to deliver recommendations for the introduction of the AstraZeneca vaccine in the country, covering AEFI, lessons learned, and risk communication management.
 - Met with the Minister of Science as part of the initiative on technopoles for the manufacture of COVID-19 vaccines. More information [here](#).
 - Facilitated the participation of the MoH in the high-level meeting on vaccines and migrants held by the PHE team in May 2021.
 - Supported Chile's participation in the multicenter study of vaccine effectiveness for COVID-19. In addition, held coordination meetings with national counterparts to explain the value that Chile's participation contributes to this study and respond to concerns.
 - Participated in a meeting to discuss the protocol of the "Effectiveness of COVID-19 Vaccines: a multicenter regional evaluation" study and took part in the follow-up meetings.
 - Hired professionals to support the plan for strengthening AEFI surveillance and information systems for epidemiological surveillance.
 - Facilitated the country's participation in the study of vaccination effectiveness in the context of REVELAC-COVID-19, involving the MoH and regional teams.
 - Facilitated the meeting to share knowledge and experiences with the vaccination of children and adolescents. Representatives of the PAHO offices in Brazil and Chile, senior staff from the MoH Department of Immunizations and Epidemiology, health authorities, and a team of researchers from Brazil participated.
 - A multidisciplinary team from PAHO analyzed the availability of epidemiological information and information on progress with vaccination against COVID-19 in Chile and identified areas in which cooperation could contribute to research on vaccine effectiveness.
 - Held a meeting as follow-up to the vaccination impact studies in the country, evaluating the national and international proposals with the senior person in the relevant area in the MoH, Dr. Rafael Araos.
 - Reviewed the plan to analyze vaccine effectiveness with the Regional Office and agreed on next steps in order to present the methodology to national experts and conduct joint analysis (May 2021).



Colombia



Country-level coordination, planning, and monitoring

- Participated in the Unified Command Post for COVID-19 (Puesto de Mando Unificado – PMU), an entity created to coordinate operational issues related to a specific incident or event in the country.
- Developed 254 COVID-19 situation reports, consolidating national information and data from the municipalities with the highest transmission levels.
- Participated in weekly crisis committees to monitor and assess the pandemic situation at the global, regional, and national levels.
- Supported the review and updating of the pandemic preparedness and response plan in the context of the Pandemic Influenza Preparedness (PIP) Framework.
- Facilitated a bilateral Colombia-Venezuela dialogue between ministries of health to jointly address the health situation of migrants, including action taken in response to the pandemic.
- Supported consolidation of the Incident Command System (SCI) that had been operating to respond to the migration crisis and has been further strengthened by the response to the pandemic.
- Participated in the presidential sessions on Prevention and Action, in which experts from WHO and PAHO, including PAHO's Director, provided technical advice with strategic messages aimed at the Colombian population.

- Offered PWR leadership in the UN system to manage and support the response.
- Participated in and supported the monitoring of the Socio-Economic Response Plan (SERP) for the COVID-19 Pandemic in Colombia.
- Promoted the coordination and joint work of the Mental Health Group of the Ministry of Health and Social Protection and the PAHO/WHO mental health and psychosocial support team for operation of the national psychological tele-counseling line.
- Headed the “Impact of COVID-19 on Human Resources for Health and Policy Response: Colombia” study to analyze the impact of COVID-19 on human resources for health in the areas of safety, occupational health, and working conditions, as well as the policy responses of countries, and to increase availability and training to improve the health system's pandemic response capacity.



Risk communication and community engagement

- Designed and conducted risk communication workshops with training in the “Lower case Do No Harm” approach, for 15 departments receiving migrant populations.

- Implemented a communication strategy with an ethnic focus in four of the country's departments and 10 indigenous groups to prevent COVID-19, emphasizing prevention measures and acceptance of the COVID-19 vaccine.
- Helped the Ministry of Health and Social Protection create the differential communication strategy for the 18 cities where the vaccine study will be conducted. Supported development of the digital campaign and radio spots.
- Conducted a local radio campaign on COVID-19 case and contact tracing in the municipality of Puerto Guzmán, Putumayo. In addition, produced a campaign on the same subject for Christmas and New Year's Eve, aimed at young people.



Surveillance, rapid response teams, and case investigation

- Took action to strengthen community-based surveillance, with an emphasis on COVID-19 in scattered rural populations and municipalities prioritized as a result of the migration situation.
- Supported implementation of the case and contact tracing strategy (PRASS) in priority municipalities in the country.
- Helped strengthen the national COVID-19 response team in areas related to monitoring and promoted the use of tools that support the monitoring of health information for COVID-19 and other events at the local level through virtual situation rooms.
- Supported processes to build epidemic response capacity, analyze data, and create spaces for analysis in physical and virtual situation rooms.
- Donated PPE in priority territories.
- Hired professionals for Amazonas, Chocó, and Cundinamarca to improve public health surveillance activities, information management, and response to events of importance to public health, with an emphasis on the COVID-19 response.



Points of entry, international travel, and transport

- Supported territories in border areas to strengthen response capacities associated with health risks caused by mixed migration flows. There was a consultation process at tri-border crossings (the state of Amazonas, Brazil, and Peru).
- Donated supplies to support surveillance and the identification of alerts at points of entry (ports, airports, and border crossings), implementing biosafety measures and using PPE for each case.
- Regarding health at points of entry, supported international and national air entry points, in addition to the land terminal as an entry point to Bogotá from different municipalities, in identifying cases and contacts.
- To support the response on the border with Brazil, Ecuador, and Peru, the hospital in Leticia (Amazonas) was strengthened with additional health personnel, equipment, and supplies for protecting health workers, and humanitarian aid was brought in to indigenous communities. Mobilized health personnel and provided medicines, hygiene kits, three respirators, and four oxygen concentrators to the local hospital.
- Supported and trained the country for participation in the Early Investigation Protocol to follow up on the first cases and contacts. Colombia is one of the three countries in the world participating in this pilot study.



National laboratories

- Supported management processes related to the transfer of technology and supplies for administering COVID-19 diagnostic tests and conducting genomic surveillance for variants of concern in the country.
- Helped deliver supplies to diagnose COVID-19 at the national and local level (antigen tests and biosafety

kits for Amazonas, Chocó, Nariño). Helped deliver supplies for virological surveillance at the national level.

- Facilitated access to support materials on strengthening genomic surveillance and identifying variants of concern.
- Participated in recruitment and consultation processes for implementing intensified surveillance strategies through rigorous tracing of the primary contacts of confirmed cases of COVID-19 and the use of Ag-RDT tests in the field in priority departments.
- The “Prevention of burnout in COVID-19 frontline workers” project was implemented, with the aim of mitigating and reducing mental health problems in frontline health workers treating COVID-19. In-person actions were taken in hospitals, health posts, and health care units in the departments of Arauca, Chocó, Guajira, Magdalena, Nariño, and Norte de Santander, reaching 2,530 people. National virtual and digital media were used to reach 1,581 people.



Infection prevention and control and protection of the health workforce

- Supported the strengthening of infection prevention and control (IPC) practices in communities and health facilities to prepare for the treatment of COVID-19 patients and prevent transmission to staff, other patients, visitors, and the community.
- Territories such as Arauca, Cundinamarca, Norte de Santander, Putumayo, and Vichada also benefited from the delivery of personal protective equipment.
- The need to prevent and contain SARS-CoV-2 infection was articulated. Some beneficiary departments with indigenous populations (Arauca, Atlántico, Bolívar, Cauca, Cundinamarca, Cesar, Guainia, La Guajira, Magdalena, Nariño, Norte de Santander, Santander, Sucre, Valle del Vaués, and Vichada) received technical supplies, and some received items to ensure safe

drinking water, sanitation, and hygiene. These actions were supplemented in the area of communication by providing information on good practices.

- Strengthened capacity-building in self-care, as well as all collective and family biosafety measures intended for indigenous populations through participatory dialogues.
- Participated in the development and review of the guidelines for the clinical management of patients with COVID-19, which offer guidance to health service providers and Benefit Plan Administrators (EAPB) to identify cases of SARS-CoV-2 infection, as well as guidelines for the clinical management of patients with COVID-19 and their contacts.
- Followed up on the implementation of guidelines on prevention and control activities in the context of humanitarian response by United Nations agencies and NGOs.



Case management, clinical operations, and therapeutics

- Participated in technical discussions on the use of PAHO/WHO guidelines and technical content on case management and the formulation of plans to ensure the continuity of operations and provision of other essential health services.
- Strengthened the institutional response for timely care of the maternal, perinatal, and early childhood population through the donation of equipment and supplies. Provided advice and technical assistance to territorial health facilities to strengthen the individual and collective analysis of maternal mortality cases associated with COVID-19, promoting completion of the Perinatal Information System - SIP COVID-19 form to identify the epidemiological and clinical behavior of the disease in pregnant women and its effects on newborns, with the objective of guiding strategies to mitigate maternal morbidity and mortality from related causes.

- Strengthened health care for COVID-19 patients in the municipality of Ciénaga Magdalena through the donation of an oxygen generating plant.
- Took mental health care action for populations in vulnerable situations: migrants affected by different types of violence and the effects of the COVID-19 pandemic in the departments of Amazonas Arauca, Chocó, La Guajira, Magdalena, Nariño, Norte de Santander, Santander, and Vichada.
- Continued to participate in the Solidarity trial coordinated by WHO, proceeding to a new stage called “Solidarity PLUS” for promising drugs, which will roll out in 52 countries an unprecedented global collaboration in the area of COVID-19 research and development.
- Provided technical support for the country’s contribution to the WHO Global Clinical Platform on COVID-19 for the clinical characterization and management of hospitalized patients with suspected and confirmed cases of COVID-19. The report published for Colombia describes demographic data, clinical manifestations, treatment and care during hospitalization, testing and laboratory results, length of hospitalization, and deceased cases.



Operational support, logistics, and supply chain

- Delivered 264 shipments (227 tons) to the territories, containing supplies and equipment for the COVID-19 emergency, including supplies and equipment for departmental public health laboratories, ventilation equipment for ICUs, laboratory supplies and equipment, computers and tablets, cold boxes, batteries for cold chain maintenance, vaccine thermoses to support national EPIs, and reagents for screening COVID-19 patients. Delivered two capsules to transport COVID-19 patients on air force aircraft, a Halo disinfection system for patient transport aircraft, and a ventilator with accessories and consumables along with biosafety equipment for staff.

- Directly supported the National Institute of Health by supplying laboratory equipment, laboratory supplies, PCR tests, and rapid tests.
- Supported the District Health Ministry of Bogotá by providing antigen test kits, sterile microtips, and COVID-19 collection kits.
- Supported the Ministry of Public Health by delivering 10 medicine kits, printed materials to be distributed at international land and air entry points, and PPE for the Ministry’s coordination visits to intensive care units.
- Supported various requests from hospitals to provide biosafety equipment for staff.
- Supported Emergency Regulatory Centers (CRUEs) by supplying equipment to improve communication between CRUEs and hospitals to ensure the referral and counter-referral of patients.



Maintaining essential health services during the pandemic

- Contributed with technical and financial support for the implementation of interventions to improve the health of women and children and strengthen essential services over the life course, with an emphasis on indigenous populations, Afro-descendants, and migrants in scattered rural areas and issues related to breastfeeding and the prevention of gender violence.
 - 52 anthropometry kits
 - 111 obstetric emergency kits
 - 38 maternal perinatal kits
 - 2 ultrasound scanners
 - 1,100 subdermal implants
- Developed mental health and psychosocial support (MHPSS) capacity to address multiple adversities caused by the pandemic, the health crisis, migration, and the effects of violence related to mental health in the departments of Arauca, Norte de Santander, Chocó, Amazonas, Santander, Vichada, Magdalena, Nariño, and La Guajira.

- Contributed to the improvement of nutritional health in children under 5 with moderate and severe acute malnutrition by donating F75 and FTLIC therapeutic formulas, and building capacities in the development of healthy eating guidelines, with an emphasis on breastfeeding as a protective factor associated with COVID-19.
- Designed and developed a virtual course to ensure that health institutions have installed capacity for procedures and key messages that promote the integration and reintegration of health personnel in comprehensive maternal perinatal care and obstetric emergencies.
- Conducted a diagnostic assessment with the Colombian Federation of Obstetrics and Gynecology to determine the response capacity of obstetric services in 12 priority departments, in order to evaluate the installed capacity and sufficiency of human resources in the context of the pandemic; based on the findings, recommendations were made to mitigate the impact of the health emergency.
- Developed community management capacities to provide care to communities in priority and vulnerable areas, as well as local management capacity in health services, by providing financial support for communication systems and the organization of itinerant services for remote and vulnerable populations. Both initiatives took place in selected territories of the country, with synergistic action with projects currently under way as of December 2021.
- Provided technical support to the “Impact of the COVID-19 pandemic on the mental health of health care workers,” the international multicentric COVID-19 Health care Workers (HEROES) research project study.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Contributed to the drafting of the National COVID-19 Vaccination Plan and the development and ongoing adjustment of the Technical and Operational Guidelines for Vaccination against COVID-19.
- Supported microplanning processes to ensure the distribution and delivery of vaccines.
- Strengthened vaccination-related competencies at the subnational level and the COVID-19 component of the epidemiological information system.
- Helped strengthen the national post-vaccination adverse event surveillance system (EAPV), in collaboration with the National Regulatory Authority (INVIMA).
- Delivered cold chain and information system supplies to the country’s territorial entities.
- Organized knowledge dialogues with an ethnic focus to promote COVID-19 vaccination.
- Conducted communication campaigns with a differential focus and emphasis on the indigenous population; produced 16 videos with the participation of the Ticuna and Uitoto indigenous peoples in Amazonas and the Awá and Pastos peoples in Nariño.



Costa Rica



Country-level coordination, planning, and monitoring

- Coordinated the national COVID-19 response with the National Commission for Risk Prevention and Emergency Response (CNE), integrating the Country Office into the different intersectoral roundtables, including health.
- Provided technical cooperation to the CNE's Emergency Operations Center to support decision-making on the measures to be implemented at the national level and the impact of these measures' implementation.
- Supported the technical emergency team of the UN Inter-Agency Emergency Response Group (UNETE, the technical secretariat) to coordinate the response of the UN system and other humanitarian actors to the pandemic.
- Participated in the development and implementation of the United Nations Contingency Plan on Mixed Migration Flows, providing technical support for the provision of humanitarian assistance to migrants and asylum seekers.
- Cooperated with the MoH to formulate technical guidelines, protocols, etc., which served as the basis for public health measures to manage the pandemic.
- Participated in the health services roundtable with the International Center for Pure and Applied Mathematics (CIMPA) of the University of Costa Rica, the Social Security Fund (CCSS), and the MoH. At these meetings, the evolving behavior of the pandemic was analyzed and projections were made regarding its impact to enable decision-making and adjustments regarding health measures and the recovery of the national economy.
- Supported the preparation of the first study of public spending on health and COVID-19 in the Region, together with the economics unit of the MoH. Strengthened capacities in the use of the SHA2011 methodology and the analysis of economic data on health. The 2017-2019 National Health Accounts report was also prepared for publication.
- Supported the national regulatory authority for medicines and medical devices to address the COVID-19 emergency in terms of registration and pharmacovigilance. Strengthened processes in general for the authority's quality management, training on regulatory aspects, and integration with regional processes.
- Developed an initiative to promote overall health and the prevention of COVID-19 among indigenous and migrant children and families who participate in the coffee harvest, in collaboration with the Costa Rican Coffee Institute (ICAFE). The initiative was expanded to the network of Child Care and Development Centers (CECUDI) in host communities and others with high levels of vulnerability.

- Provided technical support for drafting the National Plan for Pharmaceutical Services, based on primary health care in the context of COVID-19, in conjunction with the MoH.
- Coordinated a training strategy to strengthen care centers for the return of in-person activities in the context of the pandemic, in collaboration with the Technical Directorate of the National Education and Nutrition Centers and Comprehensive Care Child Centers (CEN-CINAI).
- Supported strengthening of the human resources unit of the MoH (definition of functions, competencies, staff training) to address the COVID-19 emergency.
- Participated in dialogue and work sessions with national authorities and various sectors of society (chambers of commerce, business associations, professional associations, etc.) to seek intersectoral feedback and consensus to accelerate vaccination efforts and economic recovery.
- In collaboration with other agencies of the UN system (ILO, IOM, and UNHCR), provided training and support for the economic recovery of 195 women who in turn, visited 870 families and 850 businesses to distribute promotional materials on the prevention of COVID-19 and report on adherence to health protocols, community surveillance, and the prevention of xenophobia, discrimination, and gender-based violence. These efforts were part of a project conducted alongside these UN agencies to foster the economic recovery and health of migrant women and host communities in cross-border areas of the country.
- Provided technical cooperation to the MoH risk management team to develop the National Health Sector Strategy for Comprehensive Management of Risks, Disasters, and Health Emergencies.
- Strengthened the capacities of the MoH, CNE, CCSS, the National Institute of Health (INS), and Red Cross officials on the following topics: hospital risk management in violent environments, the SISTOCK and SUMA software for managing supplies

and equipment during emergencies, the WHO Strategic Tool for Assessing Risks (STAR), Disability Inclusion in Hospital Disaster Risk Management (INGRID), SMART Hospitals, and the Multi-hazard Response Framework.

- Facilitated negotiation and interconnected work at the highest level of coordination in the Technical Advisory Committee for International Assistance (CATAI); the CNE; the Medical Information and Coordination Cell (CICOM) of the MoH; and the Emergency and Disaster Response Center (CAED) of the CCSS. As humanitarian aid for Costa Rica materialized, PAHO's EMT infrastructure in Panama and the human resources of the Emergency Medical Assistance Service (SAMU) of Seville supported coordination of the aid.
- Supported the Health Operational Table to prepare a manual of procedures and actions for coordination of the Medical Information and Coordination Cell (CICOM).



Risk communication and community engagement

- Participated in information campaigns on COVID-19 prevention and vaccination promotion with institutions such as the MoH, CCSS, CNE, the Ministry of Justice, and municipalities from various cantons.
- Participated with the UN system (IOM, UNICEF, UNFPA, UNHCR, and the Resident Coordinator's Office) in campaigns to combat COVID-19, geared to vulnerable populations, such as migrants and asylum seekers.
- Participated in large-scale campaigns aimed at protecting mental health and preventing suicides in the context of the pandemic, an initiative developed with the MoH, 9-1-1, and the College of Professionals in Psychology. Co-produced a weekly radio program aimed at the population of San Carlos, which is one of the areas with the highest increase in suicide attempts in the past two years.

- Provided support to the Information System for Emergency Prevention and Response (SIPAE) in its role as technical advisory committee for the management of public information and risk communication.
- Helped strengthen communication capacities with partners in the IMAS “Bridge to Development” strategy, including the Ministry of Public Education and of Culture and Youth, in the design of health communication materials.
- Supported the organization of and participation in high-level events such as: “Mental Health in the COVID-19 pandemic: A priority for women’s human rights”; the international symposium “Transparency and access to information in times of pandemic,” organized by the Legislative Assembly of Costa Rica; and the Conference on Risk Management (University of Costa Rica).
- Engaged in technical collaboration with the Municipality of San José, promoting and supporting community-based risk communication activities and “house-to-house” campaigns in the communities.
- Supported the pandemic response in indigenous territories through the development of COVID-19 action plans, risk communication, and the promotion of intercultural dialogues with local government actors – specifically, Integrated Indigenous Development associations. The impact of COVID-19 on indigenous peoples, populations in movement, and other groups in situations of vulnerability has remained a critical aspect of PAHO’s response.
- Strengthened community participation and primary health care processes in the COVID-19 response, particularly through the development of COVID-19 response work plans, in coordination with institutions outside the health sector, such as the Joint Institute for Social Assistance and municipal emergency committees in 24 cantons.



Surveillance, rapid response teams, and case investigation

- Collaborated with national authorities on the activation of the MoH Situation Room for the analysis of epidemiological information and decision-making for COVID-19, including preparation of operational technical documents.
- Coordinated with the MoH and CCSS on the national response to COVID-19, adapting PAHO protocols and recommendations, including prevention and control measures for the health, justice, education, housing, human development, economy, tourism, culture, and youth sectors, as well as for local governments.
- Provided training on the Go.Data tool for monitoring patients and contacts, in coordination with the regional team.
- Supported the MoH in developing a proposal for the establishment of community-based epidemiological surveillance in priority areas.
- Coordinated efforts to deploy an emergency medical team (EMT) from Panama to support the country’s COVID-19 response, which included mobile hospitals.



Points of entry, international travel, and transport

- Supported and advised national authorities on assessment of the implementation of public health measures and strategies and procedures for the control and opening of points of entry into the country. Developed projections, data analyses, and evidence to guide the adoption of public health measures (ranging from mobility control to capacity limits in public spaces).



National laboratories

- Supported the development and implementation of the COVID-19 national laboratory plan of the Network of Public Health Laboratories.
- Trained personnel from the Costa Rican Institute of Research and Teaching in Nutrition and Health (INCIENSA) in the molecular diagnosis of SARS-CoV-2.
- Donated reagents and supplies to the MoH for the molecular diagnosis of SARS-CoV-2; donated 16,000 antigen tests to the CCSS.
- Promoted the implementation of genomic surveillance of COVID-19 with INCIENSA and CCSS, expansion of the COVID-19 diagnostic network, and updating of the diagnostic methods for SARS-CoV-2.
- Advised on the inclusion of human resources for health (HRH) management issues in the context of the COVID-19 response.
- Developed recommendations on the establishment of alternative medical care sites (AMCS) for patient care.
- Supported a project on community participation in four cantons of the country, with interinstitutional and community input in work plans for the local response.
- Supported a project to address COVID-19 in indigenous territories (nine indigenous peoples) to identify needs and strengthen local coordination.
- Supported the MoH, the CCSS, and private health providers facing an increase in hospitalizations due to COVID-19 to identify needs and design a plan for the use of private sector hospital beds as part of public health care.



Infection prevention and control and protection of the health workforce

- Supported the review of quality and regulatory information on equipment and supplies donated to the national authorities.
- Supported revision of the MoH guidelines for the opening of day centers for older persons.



Case management, clinical operations, and therapeutics

- Collaborated with priority municipalities to ensure an integrated response to COVID-19 in vulnerable communities.
- Helped prepare the National Plan for Prehospital Services for COVID-19, with the MoH, Red Cross, CCSS, and the private sector.



Operational support, logistics, and supply chain

- Supported implementation of the PAHO Supply Management System (SUMA) for the CNE.
- Supported the inclusion of information from Costa Rica in the WHO COVID-19 Partners Platform and the procurement portal.
- Donated PPE, medical equipment, and other supplies for the COVID-19 response to INAMU, DGME, ministries of justice and peace, CNE, CCSS, MoH, INCIENSA, and the Red Cross.
- Worked on a standard operating procedure to strengthen the use of PAHO's Strategic Fund in Costa Rica, in conjunction with CCSS and the MoH.
- Mobilized medical equipment and supplies from EMTs in Panama and human resources from the Emergency Medical Assistance Service (SAMU) in Seville to support hospital services overwhelmed by the pandemic.



Maintaining essential health services during the pandemic

- Collaborated in the formulation of the plan to strengthen and expand CCSS health services.
- Supported the development of CCSS Health Service Indicators in Phase II of expanding services for the response to COVID-19.
- Advised on maternal and perinatal health in the context of COVID-19.
- Advised on the continuity of the delivery of priority essential health services for communicable and noncommunicable diseases, including malaria, arboviruses, influenza, mental health, cancer, smoking, and alcoholism.
- Advised on the implementation of strategies for the approach to mental health in the context of COVID-19.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirement, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Provided guidance on regulation, pharmacovigilance, and other operations related to the introduction of the COVID-19 vaccine.
- Revised and analyzed, together with the MoH, consolidated regional and global information on events supposedly attributable to vaccination or immunization (ESAVI). Actively participated in the National Commission on Immunization and Epidemiology.
- Supported the MoH Regulatory Directorate to review actions recommended for the emergency use authorization of the COVID-19 vaccine in Costa Rica, including the introduction of the Pfizer vaccine against SARS-CoV-2 through a bilateral agreement. Worked with regulatory authorities to support the registration and emergency use authorization of subsequent COVID-19 vaccines.
- Supported Costa Rica's participation in PAHO's COVID-19 vaccine simulation exercise, in support of the regulation and oversight of COVID-19 vaccines in Central America.
- Collaborated with the National Vaccination and Epidemiology Commission in Costa Rica, participating in the development and periodic updating of guidelines for planning and implementing the COVID-19 immunization campaign; analyzing adverse events at the national level; periodically reviewing the technical criteria for the different vaccine protocols; and monitoring vaccination progress by risk stratification groups.
- Participated in a UN Working Group (Office of the Resident Coordinator, UNHCR, IOM, PAHO/WHO) that worked with the Government of Costa Rica to expand vaccination to migrants and asylum seekers, groups that previously did not fall under the national target groups.
- Initiated coordination for a study on the impact of different COVID-19 vaccines schedules (REVELAC-COVID-19) on severe acute respiratory infections. Advances are under way for the preparation of the research protocol.



Cuba



Country-level coordination, planning, and monitoring

- Coordinated, on an ongoing basis, with the Ministry of Public Health (MINSAP), UN agencies, multilateral partners, and accredited diplomatic missions in Cuba to strengthen the country's response to COVID-19.
- Spearheaded the immediate response of the UN system with the MINSAP while coordinating critical aspects of the socioeconomic COVID-19 response plan.
- Collaborated with health authorities and the biopharmaceutical sector in the quest for financing alternatives through the European Union with a view to achieving greater availability of supplies, equipment, and other elements needed for the pandemic response.



Risk communication and community engagement

- Working with MINSAP, supported the formulation of key health strategies and messages for risk communication and community participation.
- Supported countrywide distribution of print material resulting from these strategies, as well as the airing of TV spots on national television.

- Prepared an information package for decisionmakers and researchers in the interest of sharing information; information packages were delivered to those working on COVID-19 surveillance, care, communication, and management.
- Developed infographics and videos with information on COVID-19 for older persons, people with disabilities, tobacco users, adolescents, and families in general, with an emphasis on care for young children.
- Disseminated a package of manuals for MHPSS, prepared by the government's mental health unit in line with PAHO recommendations.
- Organized press conferences and interviews with national and foreign media accredited in Cuba.
- Provided coverage and disseminated technical cooperation activities related to efforts to deal with COVID-19.
- Distributed a quarterly bulletin entitled "Andar la salud" (Pathways to Health) on topics related to the pandemic response and other areas aimed at protecting the population and reducing the spread of the virus.
- Contributed to the interagency risk communication work connected with COVID-19, collaborating with entities such as UNESCO and the Resident Coordinator's Office (RCO) on hygiene/health measures, on discrediting misinformation, and with UNICEF on preventing COVID-19 in school and

family settings. Partnerships with the Ministry of Education were strengthened with the development of communication materials for teachers and school settings to prevent or reduce the risk of infection.

- Reports prepared by PAHO were published weekly and disseminated widely, covering the epidemiological situation and the country's response.



Surveillance, rapid response teams, and case investigation

- Participated in the training of national epidemiological surveillance and analysis teams.
- Disseminated updated WHO guidelines on COVID-19 surveillance.



Points of entry, international travel, and transport

- Supported health promotion efforts by preparing communication materials on health and COVID-19 prevention, which were disseminated at all international points of entry.



National laboratories

- Procured equipment and supplies for surveillance and case detection, including reagents for diagnosis and genomic characterization, RNA extraction kits, and other supplies, and arranged for means of transportation.
- Trained the team at the National Reference Laboratory for Respiratory Viruses on the diagnosis of SARS-CoV-2 through molecular biology and on genomic surveillance.



Infection prevention and control and protection of the health workforce

- Procured soap, disinfectants, supplies for handwashing and cleaning surfaces, and autoclave equipment, as well as bags for the safe disposal of laboratory waste and PPE, meeting biosafety standards.
- Shared and disseminated PAHO and WHO protocols and guidelines for IPC in health facilities, prisons, and long-term care facilities for consideration by the national authorities.



Case management, clinical operations, and therapeutics

- Procured pulse oximeters, two ultrasound machines, medicines, and medical supplies for the management of serious ICU cases.
- Provided technical advice to MINSAP to systematically update protocols for the care of COVID-19 patients, addressing the reorganization and expansion of health services.
- Facilitated exchanges among experts on regional and global experiences involving COVID-19 case management.
- Shared PAHO recommendations regarding the emergency use of unproven treatment options, reinforcing ethical and regulatory aspects and the need to generate reliable scientific evidence.



Operational support, logistics, and supply chain

- Supported health authorities in determining and calculating needs for PPE, medicines, and essential supplies.

- Coordinated with the national authorities and United Nations agencies on the use of the UN Global Platform, in both the technical and supply areas.
- Supported information and communication services to hold virtual meetings for sharing experiences and conducting training.
- Drawing on official PAHO information, supported the production of country newsletters and platforms, led by the National Center for Medical Sciences Information (INFOMED), a PAHO Collaborating Center.
- Sent PPE, PCR machine repair and calibration materials, PCR diagnostic kits, equipment for transporting specimens, protective face masks, antigen-based rapid diagnostic tests and corresponding equipment, trauma kits, and COVID-19 kits, in addition to materials and supplies needed for SARS-CoV-2 sequencing and detection of variants, including a flask to inactivate the virus during transport.
- Facilitated donations of medicines, disposable materials, medical devices, and other equipment – supplies that are essential to strengthen the response to emergencies resulting from hydrometeorological events, which were occurring as part of an especially active hurricane season.



Maintaining essential health services during the pandemic

- Provided guidance on modeling scenarios for health system planning and expansion.
- Supported the evaluation of hospital and isolation center readiness for the management of COVID-19 cases following PAHO guidelines.
- Supported the reorganization of health services into comprehensive networks to maintain essential services, in addition to priority programs.
- Promoted the dissemination of information and knowledge through communication, with a gender perspective, on self-care and community care in the face of COVID-19 and its gender consequences in the school setting.



Vaccination

- Supported the strengthening of the cold chain management system.
- Supported the country with the acquisition of one million syringes for the administration of vaccines.
- Led interagency processes with all agencies of the UN system accredited in Cuba to support the country's vaccination plan.
- Acquired 283 prequalified (PQS) refrigerators, household refrigerators, thermoses, and ice packs.



Dominica



Country-level coordination, planning, and monitoring

- Maintained the Country Office's IMST structure and adapted the members' roles to the pillars of WHO's strategic plan to facilitate implementation and reporting.
- Maintained publication of the COVID-19 information bulletin, including measures taken to contain the spread of the virus and highlights of PAHO's support to Member States.
- Produced daily COVID-19 briefs for national health authorities and other stakeholders.
- Coordinated with the United Nations Resident Coordinator (UNRC) system on COVID-19 initiatives. Provided in-country UN staff with PAHO and WHO guidelines and updates.
- Launched consultations with national health authorities on the development of country strategic preparedness and response plans according to WHO guidelines.
- Provided IT and communication equipment to strengthen the Health EOC.
- Trained community health aides to work rapidly throughout the country, assisting the COVID-19 response at the community level.



Risk communication and community engagement

- Conducted media briefings on PAHO's in-country support and collaboration with the MoH.
- Engaged with young people to ensure their participation in the Youth Leader Forum.
- Provided equipment for strengthening the Health Promotion Unit for the production and dissemination of local communications materials.
- Conducted a webinar on dengue response during the pandemic targeting policymakers, health experts, and medical and public health practitioners.
- Produced videos highlighting the contributions and issues faced by HCWs in the COVID-19 response.
- Published a case study featuring community health workers in Dominica leading the fight against COVID-19.
- Implemented a "No Smoking" campaign to decrease the risks associated with tobacco and COVID-19.
- Conducted the webinar "Variants of Concern Delta and Omicron: Transmissibility, Severity, and Impact on Social Mobility: What Will Drive Future Trends and Optimize our Response," aimed at national authorities and decisionmakers from Eastern Caribbean countries.

- Developed and disseminated communication materials to address gaps in knowledge and concerns about COVID-19 vaccines. A discussion series, “A matter of fact,” was developed to inform and educate, helping to dispel concerns linked with vaccine hesitancy.



Surveillance, rapid response teams, and case investigation

- Disseminated COVID-19 case definitions.
- Shared data collection tools (e.g., Excel line listing, revised case reporting form) and provided guidance on their use to strengthen COVID-19 surveillance.
- Provided orientation on Go.Data, the WHO contact tracing software. Procured and implemented a mobile application for contact tracing.
- Retrofitted the country’s quarantine facility.
- Provided orientation on applying the EpiEstim and CovidSIM models for short-term forecasting of cases.
- Provided technical guidance on the design of a COVID-19 community survey.
- Shared protocols for surveillance, contact tracing, and case identification with national health authorities.
- Supported early detection of cases through existing surveillance systems to inform and improve analysis and decision-making.
- Procured 10 infrared and 100 digital contact thermometers for surveillance and case management of persons with COVID-19.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.
- Strengthened capacity for surveillance, contact tracing, and data entry through the hiring of surveillance officers, IT technicians, and data entry clerks and the provision of IT equipment, including laptops and tablets, to national health authorities.

- Conducted an assessment of surveillance system and information flow with respect to COVID-19 and developed plans for improvement, including through automation of standardized analytics.



Points of entry, international travel, and transport

- Provided training in IPC, surveillance, and case management at ports.
- Provided technical advice regarding the reorganization of port facilities to facilitate case identification, quarantine/isolation, and referral.
- Regularly reviewed entry protocols for the reopening of borders as they became available and provided feedback to national health authorities, as appropriate.
- Jointly hosted a webinar on considerations for resuming nonessential travel in the Caribbean.
- Strengthened surveillance activities at ports of entry by hiring data entry clerks, port health officers, and health workers.
- Procured thermal imagers to strengthen capacities in port health surveillance.



National laboratories

- Disseminated guidelines and protocols for COVID-19 testing.
- Procured/distributed RT-PCR enzymes, sample collection materials, extraction kits, and consumables.
- Trained laboratory staff in theoretical aspects of molecular diagnostics.
- Ensured laboratory capacity to detect cases with necessary tests and reagents and scale up capacity as more cases are detected.

- Conducted a webinar on scaling up laboratory testing in the Caribbean.
- Conducted a training on molecular testing to establish on-island testing capacity.
- Facilitated joint collaboration with the regional team to create an emergency stock of COVID-19 laboratory materials for distribution to countries and territories in the subregion.
- Disseminated updates on COVID-19 diagnostics, including recommendations for use of rapid antigen tests for COVID-19.
- Procured additional GeneXpert cartridges, laboratory test kits, rapid antigen kits, nasopharyngeal swabs, and consumables to strengthen laboratories for SARS-CoV-2 diagnosis.



Infection prevention and control and protection of the health workforce

- Procured PPE, including masks, gowns, etc., to reduce the risk of infection for health workers.
- Delivered IPC training in English and Spanish to nurses, doctors, and allied health care workers.
- Shared IPC guidelines with national authorities and other health personnel in the country.
- Provided specialized training on IPC to hospital staff in the country.



Case management, clinical operations, and therapeutics

- Trained health personnel in the appropriate use of PPE.
- Shared case management guidelines with the national authorities.

- Improved the protection of health care workers to detect COVID-19 and deliver health care services.
- Supported nurses in completing a certificate course in critical care. This aimed to deliver high-level critical care and scale up available human resources to respond in a timely manner in the event of a second or third wave.
- Procured eight vital signs monitors, six ventilators, three infusion pumps, and five oxygen concentrators to augment capacity for the management of COVID-19 cases.
- Provided support for the acquisition of an increased supply of oxygen for continued treatment of COVID-19 patients.
- Deployed emergency medical teams to provide surge capacity and direct care for hospitalized COVID-19 patients.
- Conducted an assessment of health systems and services in terms of COVID-19 response capacities.



Operational support, logistics, and supply chain

- Provided logistical support to clear COVID-19 materials and supplies through customs for delivery to the MoH.
- Provided logistical support for the procurement of a supply of reagents for PCR testing, PPE, and a vehicle to strengthen the management and surveillance of COVID-19 cases.



Maintaining essential health services during the pandemic

- Provided technical guidance on reorganization of the health system to respond to COVID-19 cases and better enable the country's health system to respond to COVID-19.

- Completed the first stage of the WHO/UNICEF Joint Reporting Form, aimed at boosting the capacity to track implementation of the Global Vaccine Action Plan. The monthly reporting was established as part of the tracking mechanism to monitor the effects of COVID-19 on the immunization program.
- Strengthened preventive foot care for persons with diabetes and peripheral artery disease during COVID-19 through capacity-building for health care workers and cosmetologists; the procurement of Doppler ultrasound equipment; and development of a training video.
- Trained health personnel online to implement the Self-Management for Chronic Disease Program. Provided manuals and tablets to support implementation of the program.
- Shared technical guidance for maternal care during COVID-19. Also prepared a summary fact sheet to share the latest evidence on the increased risk of COVID-19 complications during pregnancy. Shared a data collection form for monitoring pregnant women.
- Shared guidance on the care of older persons during and after COVID-19. Provided support to strengthen and update the Perinatal Information System to include a COVID-19 module.
- Installed WASH infrastructure in selected health facilities.
- Provided training programs for MoH staff on aspects of clinical management and other health concerns, including family planning, mental health, HEARTS, and the chronic care model, in the context of COVID-19.
- Implemented the Cardiovascular Risk module of HEARTS at selected sites to reduce cardiovascular risk in persons with chronic diseases during the COVID-19 pandemic.
- Participated in training for Vaccination Week in the Americas and on psychological first aid, both in the context of COVID-19.
- In the context of COVID-19, delivered training on clinical case management, mental health, management of pregnancy, and children and disabilities.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Conducted training sessions on ESAVI surveillance operations and cold chain management.
- Provided technical support for development of the COVID-19 National Deployment and Vaccination Plan; supported vaccine introduction readiness using the VIRAT.
- Provided technical support to the MoH for the introduction and rollout of the COVID-19 vaccine.
- Trained national immunization focal points in the management of the COVID-19 vaccine.
- Conducted webinars on COVID-19 vaccination and international travel and on monitoring COVID-19 vaccine deployment towards herd immunity.
- Improved the capacity to store and manage vaccines and address cold chain needs, including the procurement of cold chain equipment.
- Supported improving data quality, through the digitalization of COVID-19 vaccine data, by hiring data entry clerks and procuring IT equipment.
- Procured a vehicle to support the rollout of the COVID-19 vaccination program.



Dominican Republic



Country-level coordination, planning, and monitoring

- Engaged in high-level meetings with the government to present PAHO's recommendations on scenarios associated with the pandemic, including on COVID-19 vaccines.
- In coordination with the MOH, prepared the Operational Plan for Response to the COVID-19 Emergency, which was formally presented to the Health Cabinet, coordinated by the Office of the Vice President of the Republic.
- Contributed to the COVID-19 Recovery Needs Assessment (CRNA), spearheaded by the Ministry of Economy, Planning, and Development, in coordination with United Nations agencies. This effort has made it possible to identify gaps and additional social and economic recovery needs, advance in the preparation of recovery strategies, and guide the country's budgetary reorientation and international cooperation.
- Delivered supplies and equipment for the Dr. Defilló National Public Health Laboratory, National Health Service (SNS), General Directorate of Epidemiology of the Ministry of Health (DIGEPI), and Expanded Program on Immunization (EPI).



Risk communication and community engagement

- Prepared and delivered posters, brochures, and television video scripts, as well as radio promotions.
- Supported the dissemination of COVID-19 information and prevention messages for the general population through the Organization's own social media channels.
- Supported the Knowledge, Attitudes, and Practices (KAP) survey conducted in the provinces of Santiago, La Vega, Puerto Plata, Santo Domingo, Distrito Nacional, and Barahona, which provides input to guide risk communication activities for COVID-19.



Surveillance, rapid response teams, and case investigation

- Supported the hiring of 51 health professionals to strengthen epidemiological surveillance for investigating COVID-19 cases and contacts, as well as adverse events following immunization (AEFI) in the priority provinces with the highest number of cases, epidemiological silence, or lower COVID-19 vaccination coverage.
- Helped coordinate the shipment of positive SARS-CoV-2 samples for genomic sequencing through the PAHO/WHO Regional Genomic Sequencing Network to identify any variants that may be circulating in the country.



Points of entry, international travel, and transport

- Provided technical support to the Directorate of Risk and Disaster Management and the General Directorate of Epidemiology through the design of the training program and methodology, including the facilitator profile, facilitator manual, participant manual, and tools for evaluating personnel trained in responding to COVID-19 at points of entry such as ports and airports in the country.



National laboratories

- Supported the MoH's Dr. Defilló National Laboratory, providing consumables used in the assembly and processing of SARS-CoV-2 tests, as well as training sessions on the new protocols for beginning genomic surveillance and the sequencing of positive samples, in order to identify any variants that may be circulating in the country.



Infection prevention and control and protection of the health workforce

- Donated 900,000 surgical masks to the General Directorate of Prisons, National Health Service (SNS), and Ministry of Public Health (MoH).



Case management, clinical operations, and therapeutics

- Trained the medical and administrative staff of primary care units (UNAPs) and hospitals in the care and management of COVID-19 and other serious

ARIs, including other unusual viruses, in three main areas: intensive care, respiratory therapy, and nursing. Improved tools for monitoring and evaluating clinical cases in the participating institutions.



Operational support, logistics, and supply chain

- Supported the mobilization of resources for the transport, storage, and distribution of materials and supplies, and provided support for the different response areas.



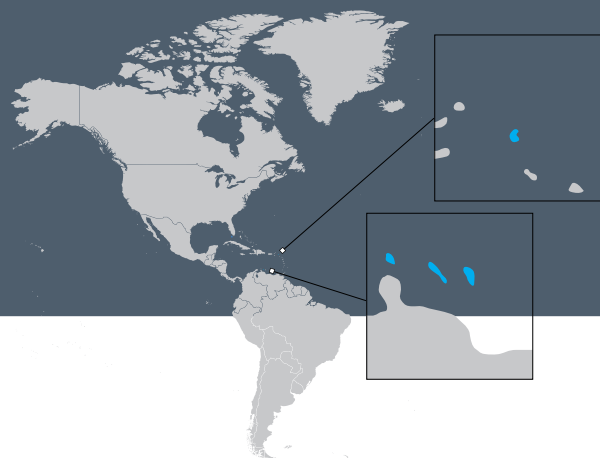
Maintaining essential health services during the pandemic

- Provided technical support for assessing the social and economic impact and effects of the COVID-19 pandemic on the Expanded Program on Immunization (EPI) and the Maternal and Child and Vector-borne Communicable Diseases program.
- Conducted a training on Damage Assessment and Needs Analysis (DANA-Health), designed for risk management focal points in the Provincial Health Directorates prioritized by risk and geographical location. This training is an important step toward strengthening human resources for health in terms of emergency preparedness and response, improving decision-making based on the identification of needs and gaps in public health emergencies and disasters, with a comprehensive perspective and a multidisciplinary and interinstitutional approach.
- Maintained actions to expand the HEARTS strategy in the country, promoting COVID-19 prevention in the population with chronic diseases such as hypertension and diabetes; also launched the Manual on the Early Detection of Childhood Cancer and the National Plan for the Prevention and Control of Cervical Cancer.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Supported the “Volver a Abrazarnos” campaign as a call for the public to think about and commit to getting vaccinated against COVID-19. This campaign involved stepping up COVID-19 vaccination activities and collecting samples in 15 priority provinces. Through this initiative, 180,728 people were vaccinated and 57,264 samples were collected for COVID-19 diagnosis; 253,000 pamphlets were distributed to the population, with messages about vaccination and other COVID-19 prevention measures; and 30,500 posters, 83 banners, and 1,454 caps and t-shirts were printed in both Haitian Creole and Spanish for COVID-19 vaccination sites. In addition, 7,800 kits with masks and hand sanitizer were supplied.



Dutch Island Territories

Aruba - Curaçao - Sint Maarten - Bonaire - Sint Eustatius - Saba



Country-level coordination, planning, and monitoring

- Supported national authorities and health agencies in formulating strategies to address the COVID-19 response.
- Provided technical guidance to focal points in the countries participating in crisis management teams.



Risk communication and community engagement

- Shared PAHO risk communication guidelines on physical distancing, use of masks, reopening of schools, coping with stressors, and safe hygiene practices.
- Provided technical guidance to Sint Maarten to reach migrants and provide information on physical distancing and safe hygiene practices and to encourage people who feel ill to get tested.
- Shared guidelines on economic reopening, especially for hotels and other accommodations.
- Shared guidelines with counterparts in Aruba, Curaçao, and Sint Maarten on the reopening of borders to international travel.



Surveillance, rapid response teams, and case investigation

- Hosted a webinar on COVID-19 surveillance and interruption of transmission.
- Provided technical support to Aruba, Curaçao, and Sint Maarten to improve the collection and analysis of surveillance data for reports included in the COVID-19 dashboard.
- Supported the disaggregation of COVID-19 data for Bonaire, Saba, and Sint Eustatius to allow island-specific data to guide travel advisories, given the difference in transmission rates among these three territories.



Points of entry, international travel, and transport

- Provided technical support to the Directorate of Risk and Disaster Management and the General Directorate of Epidemiology through the design of a training program and methodology, including the facilitator profile, facilitator manual, participant manual, and tools for evaluating personnel trained in responding to COVID-19 at points of entry such as ports and airports in the country.



National laboratories

- Shared PAHO guidelines on COVID-19 PCR testing with the Sint Maarten Department of Health; provided guidance to the Council of Ministers on the limitations of the use of rapid testing.
- Shared WHO guidelines with Saba for establishing a drive-through testing facility.



Infection prevention and control and protection of the health workforce

- Provided technical assistance for the development of IPC guidelines for the elderly and long-term care facilities, children's homes, and residential health care facilities.
- Hosted a webinar on the reopening of schools in the context of COVID-19.
- Provided technical assistance on infection prevention and control for home care of patients with mild COVID-19 symptoms.
- Hosted a webinar on "Caring for the Caregiver, protecting your mental health when caring for others."



Case management, clinical operations, and therapeutics

- Conducted a virtual session on COVID-19 clinical management for all Dutch-speaking countries/territories.

- Provided technical guidance to Aruba and Curaçao on MHPSS and trained health care workers from Aruba and Sint Maarten in MHPSS as part of the first PAHO virtual MHPSS course.
- Conducted a two-day virtual training for 30 mental health and substance use service providers in Aruba and Curaçao in the management of substance use disorders in the context of COVID-19.



Maintaining essential health services during the pandemic

- Completed the report on the impact of COVID-19 on people with disabilities, along with a comprehensive disability analysis in Aruba.
- Developed an addendum to the national preparedness and response plan in Sint Maarten that incorporates NCDs and mental health. This approach will improve the lives of persons with NCDs and/or mental health issues who are at risk during emergencies, including the COVID-19 pandemic.



Vaccination¹

- At the beginning of 2021, with assistance from the Dutch Public Health Agency (RIVM), the Dutch Entities rolled out their vaccination programs. RIVM also coordinated the genotype testing of COVID-19 samples from the Entities. Therefore, PAHO's technical cooperation focused primarily on Pillar 9 (as noted above).

¹ The Government of the Netherlands is providing COVID-19 vaccines directly to the Dutch Caribbean. The Dutch Public Health Agency above (RIVM) has been working with the islands to develop their logistics plans and has already shipped special refrigerators to them.



Ecuador



Country-level coordination, planning, and monitoring

- Collaborated directly with Ecuador's Ministry of Public Health (MoPH) and its health emergency operations center to develop and implement the national COVID-19 Preparedness and Response Plan and its subsequent updating.
- Activated the Health Action Group of the country's humanitarian team to formulate a response to COVID-19, in coordination with the MoPH and 20 of its constituent partners.
- Participated in technical dialogues on health and international cooperation held by the Emergency Operational Committee (EOC) to provide guidance and recommendations on COVID-19 and coordinate the Organization's response to the country's priorities.
- Coordinated with the Technical Working Group on mental health to adapt and adopt PAHO protocols and methodologies for epidemiological surveillance, care at points of entry, IPC, case management, coordination, and risk communication. Developed territory-level health cooperation activities to strengthen epidemiological surveillance, risk management, health services, and infection prevention and control, and to implement health measures with related civil society organizations, especially in hard-to-reach areas where indigenous populations are present.

- Collaborated with the Refugee and Migrant Working Group (GTRM), the health group responsible for coordinating COVID-19 response activities for people with limited mobility.
- Promoted strategic partnerships with authorities, community leaders, and other social actors to promote hygiene and prevention measures in the community, in line with public health recommendations for the containment of COVID-19.
- Mobilized resources to support response actions instituted by the MoPH as part of its response plan.



Risk communication and community engagement

- Supported the formulation of a national education and communication plan on COVID-19 and trained the relevant staff to implement the COVID-19 risk communication plan.
- Helped design and implement a health promotion and risk communication plan for indigenous peoples, Afro-descendants, and Montubios and supported the development and validation of an intercultural protocol for the prevention of COVID-19 and care of patients who have contracted the virus. Trained journalists and communicators from these populations, as well as community broadcasters, to disseminate key messages. PAHO developed

and disseminated communication materials with key messages for COVID-19 prevention and health promotion with an intercultural approach, using the languages of the targeted peoples and nationalities.

- Adapted and printed risk communication materials tailored to indigenous communities, available in Achuar, Andean Kichwa, Shuar, and Spanish, with each message tailored to the differing realities of the targeted communities.
- Conducted outreach, targeting the country's peoples and nationalities, including educational messages and materials, while engaging these sectors of the population to encourage them to participate in joint activities.
- Convened weekly meetings with community and youth leaders, complemented with three knowledge-based dialogues on COVID-19 vaccination for Amazonian peoples and other groups, as well as indigenous Andean Kichwa and Afro-descendant peoples.
- Conducted a project in Pastaza, Morona, and Tungurahua provinces with the Confederation of Indigenous Nationalities of the Ecuadorian Amazon (CONFENIAE) and the "Voice of CONFENIAE" radio station, providing equipment and producing messages to prevent COVID-19 and support vaccination.



Surveillance, rapid response teams, and case investigation

- Supported the MoPH in developing and implementing national guidelines for the mitigation of COVID-19 and analyzing trends and indicators in order to modify public health measures in line with transmission scenarios and updates from WHO.
- Supported the MoPH in integrating sentinel surveillance of influenza, SARS-CoV-2, and other respiratory viruses by adapting the PAHOFlu computer system, which will allow surveillance of COVID-19 currently, and surveillance of other pandemics in the future.



Points of entry, international travel, and transport

- Worked with the national government in supervising and monitoring the IHR-designated focal points, including land, sea, and air points of entry, which made it possible to detect, verify, and report COVID-19 cases in transit that pose a risk to neighboring countries, thus strengthening coordination and response for the care and management of cases.



National laboratories

- Provided technical support for basic equipment and the development and implementation of national guidelines on SARS-CoV-2 genomic surveillance implementation and operation.



Infection prevention and control and protection of the health workforce

- Supported the MoPH in training health personnel in infection prevention and control through PAHO platforms and at in-person workshops in eight priority provinces.
- Supported the verification of triage decisions in primary health care facilities in the eight priority provinces.
- Facilitated participation of the MoPH in the PAHO regional meeting on infection prevention and control, which addressed the issue beyond the COVID-19 context.



Case management, clinical operations, and therapeutics

- Supported Ecuador's participation in the WHO Global Clinical Platform for COVID-19, which incorporated 3,234 records of COVID-19 patients hospitalized in five MoPH reference hospitals.
- Worked with the MoPH to create a national team to adapt clinical practice guidelines for COVID-19 to the country and to include a representative from Ecuador in the regional consultation groups that update COVID-19 guidelines.
- Strengthened the MoPH information system for emergency care at the primary care level by developing the emergency module in the health care records platform (PRAS).
- Supported the participation of health personnel in the webinar for updating the COVID-19 clinical guidelines.



Operational support, logistics, and supply chain

- Provided logistical support for the distribution of donations in eight priority provinces.



Maintaining essential health services during the pandemic

- Supported MoPH efforts in mobilizing health brigades to provide essential services in priority provinces, where 496 communities and over 14,000 beneficiaries were reached.
- Supported administration of the third round of the WHO Pulse survey on the continuity of essential services during the COVID-19 pandemic.
- Strengthened epidemiological surveillance activities for vaccine-preventable diseases by hiring a


consultant to support MoH activities and by funding the transport of samples to the regional reference laboratories and procuring laboratory supplies for processing of the samples by INSPI (National Institute for Public Health Research).

- Conducted training activities through virtual workshops and in-service training to strengthen the surveillance of vaccine-preventable diseases, in addition to strengthening the vaccination activities of the regular program at the national level.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- In collaboration with the MoPH, convened and led a group of international cooperation agencies engaged in deploying vaccines. Participants in this effort included the World Bank, the Inter-American Development Bank (IDB), the Andean Development Corporation (CAF), the International Organization for Migration (IOM), UNICEF, UNDP, and the office of the United Nations Resident Coordinator in Ecuador.
- Supported the development of the national COVID-19 vaccination plan, including the "9/100 Plan" (the target was to vaccinate 9 million people in 100 days).
- Supported routine vaccination activities by developing a plan to resume coverage, and by deploying



consultants to support management of the regular vaccination program in the nine regional directorates and three priority provinces. Deployed consultants to support management of the national vaccination plan.

- Strengthened the National Vaccine Bank by replacing cold chain equipment for cold rooms and improving its infrastructure and equipment.
- Began implementation of the District Health Information Software 2 (DHIS2), in coordination with the regional office, the University of Oslo, and the MoPH, in order to strengthen the MoH information

system through modules with personal electronic vaccination records and surveillance of AEFI.

- Facilitated air and river transportation of vaccination brigades to hard-to-reach areas, in particular in the country's Amazon region.
- Supported the activities of the National Advisory Commission on Immunization Practices by searching for and disseminating scientific information, as well as hiring a consultant to help systematize information in order to issue recommendations along with the respective meeting minutes.



El Salvador



Country-level coordination, planning, and monitoring

- Provided ongoing support to national authorities in data analysis, preparedness for the response, and monitoring the evolution of the pandemic.
- Provided technical assistance to the MoH on priority issues such as vaccination coverage, care for vulnerable populations, and maternal and child mortality.
- Followed up on the implementation of the WHO Response Plan (Partners Platform) and worked with the UN system to prepare the Socioeconomic Response Plan.
- Coordinated the health cluster of the Humanitarian Country Team. Approximately 20 institutions that work in health in El Salvador financially contribute toward the national response.
- Advised the foreign missions of Canada, France, the United States of America, and others on possible funding gaps within the National Preparedness and Response Plan.
- Led technical activities in coordination with UN system agencies and other external donors and partners.



Risk communication and community engagement

- Provided ongoing support for risk communication, using PAHO's in-country social media networks.
- Worked with the MoH communications unit to publicize the vaccination plan.
- In conjunction with UNICEF, coordinated a series of workshops on risk communication, community communication, and communication about COVID-19 vaccination for communications teams in the nine member institutions of the National Health System.
- Collaborated with leaders of religious communities on communication issues to establish lines of action against the pandemic.
- Developed a campaign to counter myths about COVID-19 vaccination (slogan: The Power is in Your Arm), making use of influencers and personnel recognized by the MoH.
- Provided technical cooperation to build capacity in the communications unit of the National Health Institute in the context of the COVID-19 emergency.



Surveillance, rapid response teams, and case investigation

- Provided technical support for the creation of a situation room to monitor epidemiological behavior and analyze information. All information related to COVID-19 in El Salvador is online.
- Monitored the implementation of case modeling using available tools.
- Collaborated in the definition of key epidemiological variables for their incorporation into the Epidemiological Surveillance Information System (VIGEPES).
- Beginning in February 2020, supported the Epidemiology Directorate to monitor cases of pneumonia in health facilities.
- Collaborated in the detection of cases of multisystemic inflammatory syndrome in children and adolescents (under 19 years of age) and in the implementation of the pilot application of the Perinatal Information System COVID-19 module in five hospitals.



Points of entry, international travel, and transport

- Supported the country's IHR focal point and maintained constant communication with all countries and Headquarters to monitor the pandemic.
- Shared updates on containment measures and WHO recommendations for working at air, sea, and land points of entry.
- Advised on PAHO-recommended risk-focused measures for free movement across borders, using technical criteria and sharing official documents.



National laboratories

- Delivered RT-PCR tests and laboratory supplies and trained staff to use tools for extraction of the virus and processing of tests.
- Engaged in constant communication with the National Reference Laboratory to provide updates on diagnostic materials and available tests.
- Assisted in the preparation of protocols and standard operating procedures for the processing and interpretation of laboratory results.
- Supported the inclusion of El Salvador as a pilot country in the use of rapid antigen-based tests when they first became available.
- Followed up notification of the SARS-CoV-2 virus in the framework of sentinel surveillance of influenza and other respiratory viruses.
- Supported the definition of national guidelines for the implementation of surveillance and detection of variants of concern (VOC), through the use of Ag-RDT and PCR tests, once the national laboratory had the supplies for the generic detection of variants.
- Supported the transfer of samples from hospitalized patients in serious or critical condition to the national laboratory to detect variants of concern in circulation. The results of the first 100 samples processed were pivotal in enabling confirmation of the circulation of variants of concern within the country.
- Coordinated with the national IHR focal point for the notification of results from the identification of variants.
- Maintained national and regional coordination with the Gorgas Memorial Institute (Panama) for the shipment of samples for sequencing and the identification of new variants.



Infection prevention and control and protection of the health workforce

- Delivered donations and managed procurement of PPE to support authorities in the care of patients.
- Distributed technical information and guidelines produced by PAHO on the management of COVID-19 infections and other infectious diseases.
- Coordinated virtual training on the approach to IPC and shared updated information, with emphasis on the surveillance of IAAS in hospitals providing care for critically ill patients.



Case management, clinical operations, and therapeutics

- Delivered medical equipment to manage COVID-19 patients and for use in health facilities (wheelchairs, electrocardiographs, lecterns, medicine carts, etc.).
- Systematically shared PAHO information and recommendations for the treatment of cases.
- Supported the publication of clinical practice guidelines adapted for the care of critical adult patients with COVID-19 in the Americas, using the GRADE methodology, a WHO approach that entails a systematic review and quality assessment of evidence.¹



Operational support, logistics, and supply chain

- Supported hospitals in assessing needs; provided advice on the procurement of needed supplies, using funds for pandemic response.

- Provided technical assistance to the external cooperation office of the MoH to expedite shipments.
- Coordinated with the National Directorate of Medicines to develop streamlined procedures for the importation of equipment and supplies to respond to COVID-19.
- Provided equipment for the national hospital simulation room.
- Through the PAHO Revolving Fund, helped the country procure equipment needed to strengthen cold storage, ensuring the proper management of COVID-19 vaccines.
- Purchased high-tech supplies for COVID-19 case management and the post-pandemic period.



Maintaining essential health services during the pandemic

- Worked with the first level of care, the hospital directorate, and health promotion to ensure the continuity of all health services, especially those associated with NCDs, mental health, and access to medications.
- Supported the arrival of vaccines for other vaccine-preventable diseases and supplies to sustain vaccination efforts, despite restrictions on movement within the country.
- Supported the development of pandemic management plans for the progressive reopening of essential primary care services, for morbidities such as HIV, TB, and vector-borne diseases (such as malaria and dengue). Procured medications to ensure the management of patients with HIV/TB as a key area of focus in the context of the pandemic.
- Provided technical assistance to the vector control program to reactivate arbovirus vector control activities, with an emphasis on dengue and the malaria elimination process.

¹ World Health Organization. WHO Handbook for Guideline Development. 2012. Available from: Retrieved on 16 September 2021 at: <https://bit.ly/35heNBZ>

- Provided technical support for continuity of the national strategy for the progressive reopening of basic health services at the first level of care, following PAHO guidelines.
- Provided support to national authorities for monitoring the impact of the COVID-19 pandemic and the evolving situation on the population's progress toward attaining universal health.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Supported the country in the application of the VIRAT/ VRAF self-assessment tools to assess and monitor progress toward vaccine preparedness.
- Worked with national authorities to develop the components of the National Deployment and Vaccination Plan for COVID-19 Vaccines.
- Supported updating of the National Immunization Technical Advisory Group (NITAG) as a fundamental step in the preparation of the plan.
- Supported the preparation of technical guidelines for purchasing supplies and cold chain equipment, recording information, and activating of the EPI crisis room, either with national funds or donations from PAHO or other partners.
- Supported the printing of vaccination cards and other materials to tackle the pandemic.
- Invested in repairs and maintenance of cold storage units for vaccines and helped hire personnel to operate them.
- Provided support to the Higher Institute of Public Health to hire 147 COVID-19 vaccinators in all states in the country, including hard-to-reach areas.



French Departments

French Guiana - Guadeloupe - Martinique



Surveillance, rapid response teams, and case investigation

- Shared PAHO's surveillance guidelines to facilitate the exchange of epidemiological information among the French Departments (Guadeloupe, Martinique, and French Guiana), the IHR focal point in France, and the IHR regional contact point for the Americas.
- Shared COVID-19 case definitions with department-level health authorities.
- Facilitated the sharing of information between French Guiana, Brazil, Guyana, and Suriname regarding the dynamics of COVID-19 in the Guyanese Shield.



National laboratories

- Shared PAHO and WHO guidelines for laboratory molecular testing.



Case management, clinical operations, and therapeutics

- Facilitated the exchange of the French Departments' COVID-19 clinical management experiences with other countries and territories in the Eastern Caribbean.



Points of entry, international travel, and transport

- Collaborated closely with counterparts from the French Departments to conduct joint risk assessments, particularly regarding outbreaks on cruise ships and their movement in the Caribbean.



Grenada



Country-level coordination, planning, and monitoring

- Adapted the national Influenza Pandemic Plan to the COVID-19 pandemic.
- Worked alongside national authorities to strengthen coordination of the national COVID-19 response.
- Launched consultations with national health authorities to develop country strategic preparedness and response plans, according to WHO guidelines.
- Continued publication of the COVID-19 information bulletin, including measures taken to contain the spread of the virus and highlights of PAHO's support to the Member States.
- Coordinated with the United Nations Resident Coordinator (UNRC) system on COVID-19 initiatives.



Risk communication and community engagement

- Produced and distributed posters and booklets on preventive public health measures.
- Provided banners for placement at points of entry.
- Helped develop social media tools and public service announcements to address stigma and suicide prevention.

- Disseminated risk communication information to citizens and travelers.
- Provided technical support to develop and disseminate social media cards to support healthy nutrition.
- Developed a breastfeeding campaign using various media platforms. Developed posters and aired the "Safe Breastfeeding during COVID-19" video on national television.
- Procured equipment to enable the Health Promotion Unit to produce and disseminate local communications materials.
- Produced a video highlighting the contributions and issues faced by HCWs in the COVID-19 response.
- Conducted a four-part webinar series on stress management for frontline workers and parents.
- Carried out a communication campaign on healthy nutrition and provided materials to enable the health sector to communicate more easily with persons with disabilities during the pandemic.
- Conducted the webinar "Variants of Concern Delta and Omicron: Transmissibility, Severity, and Impact on Social Mobility: What Will Drive Future Trends and Optimize our Response," aimed at national authorities and decision-makers from Eastern Caribbean countries.

- Developed and disseminated communication materials to address gaps in knowledge and concerns about COVID-19 vaccines. A discussion series, “A matter of fact,” was developed to inform and educate, helping to dispel concerns related to vaccine hesitancy.



Surveillance, rapid response teams, and case investigation

- Introduced data collection tools (e.g., Excel line listing, revised case reporting form).
- Offered training on Go.Data, the WHO contact tracing software for data capturing and monitoring the chain of transmission.
- Provided orientation on EpiEstim and CovidSIM, mathematical models for short-term forecasting of COVID-19 cases.
- Provided orientation for national epidemiologists and laboratory personnel on the PAHO regional program for influenza laboratory-based surveillance of SARI/ILI and its link to COVID-19.
- Collected weekly data on COVID-19 trends; hired surveillance officers to improve contact tracing.
- Procured computers for data entry and analysis in the surveillance unit.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.



Points of entry, international travel, and transport

- Assessed capacity at the international airport to ensure the effectiveness of surveillance systems.
- Provided technical guidance on considerations for the phased reopening of borders.

- Regularly reviewed and shared feedback with national authorities on the evolving entry protocols for the reopening of borders.
- Provided equipment, such as IT tools, for data collection and case detection at points of entry.
- Hosted a webinar on considerations for resuming nonessential travel in the Caribbean.



National laboratories

- Disseminated guidelines and protocols and provided training in RT-PCR detection.
- Provided technical cooperation to the national laboratory on diagnostics, including data review, troubleshooting sessions, and follow-up calls.
- Provided primers, probes, and PCR kits for reagents and tests, as well as swabs, sampling kits, rapid antigen kits, and enzymes, among other critical supplies necessary to ensure laboratory capacity to detect COVID-19 cases and scale up capacity as more cases are detected (including country participation in a webinar on this issue tailored to the Caribbean).
- Collaborated with the regional team to create an emergency stock of COVID-19 laboratory supplies for distribution to countries and territories in the subregion.
- Facilitated training by the regional team on molecular testing to establish on-island testing capacity.
- Disseminated updates on COVID-19 diagnostics, including recommendations for use of rapid antigen-based tests.
- Procured a PCR machine to strengthen laboratory capacity for molecular diagnosis of SARS-CoV-2.



Infection prevention and control and protection of the health workforce

- Strengthened IPC capacity for HCWs through in-person and virtual training. This included the launch of a virtual IPC training course to provide Caribbean HCWs and personnel involved in other high-risk professions with knowledge of best practices and recommendations to reduce their risk of infection. PAHO additionally delivered IPC education and training to frontline health workers.
- Supported the country's reopening strategy by training hotel workers in situations where hotels are being used as quarantine sites for repatriated Grenadian nationals.
- Provided handwashing and hand sanitizing stations to health care facilities as part of ongoing support for protection of HCWs.
- Provided PPE kits and PPE, including masks, gowns, gloves, etc.



Case management, clinical operations, and therapeutics

- Provided training in hospital bed assessment and supply management tools.
- Strengthened the country's ability to deliver mental health and psychosocial support to HCWs in the context of COVID-19.
- Strengthened telehealth services and community engagement to provide psychosocial support.
- Supported improvement of the local health system's capacity so health care workers could safely diagnose COVID-19 and deliver health care services.
- Procured six vital signs monitors, six ventilators, two infusion pumps, and five oxygen concentrators to augment capacity for the management of COVID-19 cases.

- Deployed two emergency medical teams (EMTs) to provide surge capacity and direct care for hospitalized COVID-19 patients.
- Conducted an assessment of health systems and services in terms of COVID-19 response capacities.
- Provided care packages that included thermometers, pulse oximeters, and information brochures for COVID-19-positive persons in home isolation.



Operational support, logistics, and supply chain

- Supported the delivery of supplies and equipment through the Regional Security System.
- Supported the procurement of reagents and tests through PAHO's Strategic Fund.
- Delivered antigen-based rapid diagnostic tests (Ag-RDTs).



Maintaining essential health services during the pandemic

- Conducted webinars on the reorganization and expansion of services, including managing emergency medical teams (EMTs), maternal and perinatal care, children with disabilities, and the Expanded Program on Immunization.
- Implemented a school policy to support the reopening of schools, reconfiguring school resources, and ensuring adequate physical activity, which may be hampered by public health measures.
- Established a committee to scale up essential services to address gender-based violence (GBV); developed a work plan with multisector input and SOPs.
- Developed and subsequently updated guidance for IPC in shelters for survivors of GBV, which is being translated into Spanish.

- Developed a framework and SOPs to strengthen essential services provided to women and girls who have been victims of violence, offering clear directives to stakeholders involved in supporting and aiding victims/survivors.
- Retrofitted and equipped shelters for women and children managed by the NGO CEDARS to continue providing services in a safe and quality setting.
- Organized a panel discussion on the future of post-COVID-19 youth employment for 42 participants.
- Strengthened the capacity of the vector control program to respond to the dengue outbreak by providing insecticide application equipment, insecticides, and entomology supplies.
- Conducted a webinar on dengue response during the pandemic, targeting policymakers, health experts, and medical and public health practitioners.
- Convened additional rounds of an EMT Coordination course tailored to the Caribbean (including three-day online trainings and webinars) for MoH staff. This facilitated the adoption of the CICOM methodology for establishing medical coordination and information cells as part of health emergency operations centers (EOCs).
- Supported the creation of a technical working group for mental health and psychosocial support.
- Developed sectoral emergency nutrition policies.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Conducted training sessions on ESAVI and cold chain management.
- Provided support to review the country's National Deployment and Vaccination Plan, designed to protect at-risk populations. Special attention was given to ensuring that frontline health workers, older persons, and people with underlying conditions were targeted for the first wave of vaccinations.
- Conducted the webinar "Variants of Concern Delta and Omicron: Transmissibility, Severity, and Impact on Social Mobility: What Will Drive Future Trends and Optimize our Response."
- Improved the capacity to store and manage vaccines and address cold chain needs, including the procurement of cold chain equipment.
- Supported improving data quality through the digitalization of COVID-19 vaccine data by hiring data entry clerks and procuring IT equipment.



Guatemala



Country-level coordination, planning, and monitoring

- Collaborated with coordinating mechanisms such as the EOC, IHR Committee, network of international health partners, and the Health Cluster.
- Supported the Ministry of Health (MoH) in the organization and weekly (and later biweekly) operation of the Health Cluster and the formation of six working subgroups to support the coordination and response of the partners in the different areas of health.
- Participated in the development of the National COVID-19 Strategic Plan 2021–2022 with MoH officials. This plan includes each of the 10 pillars of the pandemic response and was an exercise in participatory and interprogrammatic work that has made it possible to prioritize and quantify the main activities needed for the COVID-19 response.
- Contributed to the socioeconomic analysis of COVID-19 conducted by the UN system in Guatemala, as well as the preparation of the socioeconomic response plan.
- Supported the MoH in the systematization of institutional practices in response to the COVID-19 pandemic in Guatemala.
- Co-led the health cluster with the MoH, which led to significant resource mobilization for example, in

support of the Humanitarian Response Plan (HRP) requiring consultation with all MoH partners involved in the health sector response. This contributed to reinforcing MoH leadership and stewardship in the health sector.

- Provided technical support to the MoH for review and development of the National Strategic Plan for Preparedness and Response to COVID-19.



Risk communication and community engagement

- Produced risk communication materials, including almost 110,000 posters on topics such as handwashing, isolation, and PPE; trained health care workers to better inform the public.
- Trained 260 journalists, in coordination with other UN agencies.
- Supported the MoH in the development of key messages and videos that were translated into five Mayan languages.
- Provided support in developing a campaign against stigma and discrimination, the preparation of key messages for a strategy to track cases and contacts, and the production of videos in support of vaccination during the pandemic and others on handwashing and putting on PPE.

- In coordination with UNICEF, and with technical support from PAHO, inaugurated the virtual course for young communicators at community radio stations, with the participation of more than 400 people.
- Supported the MoH in developing a COVID-19 communication plan for the coming months, with the participation of allied partners, within the framework of the Risk Communication Subgroup.
- Held discussions to address risk communication with educators and health promoters; 300 people participated.
- In the framework of COVID-19, supported the MoH to review, update, and implement the multihazard risk communication strategy in Guatemala.
- Developed communication materials for the prevention of COVID-19 among indigenous peoples and the prevention of violence against women in the context of COVID-19.
- Reproduced over 100,000 COVID-19 inserts about outpatient treatment at the first level of care.
- Developed materials for the national campaign to prevent communicable and noncommunicable diseases and address their COVID-19-associated risk factors. In coordination with the MoH, 12 videos were distributed on social media and broadcast on television.
- Provided technical assistance on action to create visibility and encourage community participation and action by civil society organizations for the inclusion of people with disabilities in the COVID-19 response, within the framework of the INGRID-H methodology.
- Supported the MoH's communication efforts in the COVID-19 vaccination campaign, including support to health areas on interinstitutional strategic planning. Implemented an ethnological/anthropological assessment of vaccination barriers in 29 health areas. The results were used to design a culturally relevant communication campaign whose implementation began in December 2021.

- Supported the MoH in addressing the infodemic and managing risk communication by working to detect rumors and process scientific information to facilitate its use by technical personnel in health area directorates. Kits were delivered to help staff communicate important information about COVID-19 vaccination to communities.
- Promoted COVID-19 vaccination for pregnant women in five priority districts in San Marcos.



Surveillance, rapid response teams, and case investigation

- Trained 300 health workers in surveillance, laboratory, case management, and social communication.
- Supported the country in analyzing and visualizing the virus' effective reproductive rate and projecting how the virus will spread, considering implemented public health measures.
- Supported the MoH in the development of the COVID-19 situation dashboard, a tool that provides epidemiological information updated daily.
- Supported the MoH and the Municipality of Guatemala to develop a strategy for tracking cases and contacts. This proposal was later adapted to the rural context.
- Continued to provide technical support to the MoH in the adaptation and implementation of the Go.Data platform as a tool to support the management of contact tracing and promote interoperability with other systems used at the national level. Trained supervisors and staff responsible for monitoring and provided technical support to the health area directorates and for the creation of dashboards for monitoring contact tracing performance indicators. PAHO additionally established collaboration and partnerships between the MoH, local governments, and cooperating agencies to achieve the interoperability of information systems and automation of the daily submission of contact tracing data based on the Go.Data platform.

- Supported the development of a methodology for analyzing excess mortality from all causes to provide supplementary analysis of the impact of COVID-19, and supported the publication of annual bulletins.
- Provided technical support for the development, review, and regular updating and dissemination of the surveillance protocols.
- Together with the MoH, conducted an analysis of the epidemiological behavior of COVID-19 in the country and produced a scientific article on the impact of the introduction of antigen tests on access to the diagnosis of SARS-CoV-2 infection in Guatemala.
- Provided computer and audiovisual equipment to the technical surveillance teams at the central and local level of the MoH to improve their ability to report information, as well as their participation in virtual meetings and workshops.
- Supported the formation, training, and deployment of integrated rapid response teams to the areas affected by storms Eta and Iota with active community transmission of COVID-19.
- Facilitated participation in PAHO's Regional Genomic Surveillance Network, strengthening sequencing and bioinformatics analysis capacity and allowing the country to share genomic sequencing data and identify and describe the spread of variants of concern (VOC).
- Supported implementation of the PAHOFLU information system for the management of epidemiological, clinical, and laboratory information for sentinel surveillance of influenza and other respiratory viruses. This facilitated the development of COVID-19 vaccine effectiveness studies, disease burden analysis, and strengthening of the surveillance system.
- Provided monthly support in the form of COVID-19 case projections using the CovidSIM tool as a technical resource for high-level policy decision-making, and for making adjustments to response plans, estimating expenses, purchasing personal protective equipment, supplies, etc.
- Developed virtual self-instruction courses on COVID-19 case and contact tracing strategy for contact tracers in 12 health areas at the national and subnational levels, reaching more than 700 contact tracers in the country.
- Strengthened the technical and operational capacities of 12 health areas by collecting, managing, and analyzing information through the Go.Data system and implementing COVID-19 case and contact tracing activities.
- Supported the Epidemiology Department of the MoH with the review and updating of guidelines and strategic approaches to case and contact tracing strategy.
- Provided computer equipment, medical equipment, PPE, clothing, and supplies to tracers from 13 health area directorates to strengthen the daily activities established in the COVID-19 case and contact tracing strategy.
- Provided technical support and collaborated with the MoH in preparing and implementing the protocol for evaluating the effectiveness of the COVID-19 vaccine. Developed flowcharts and operational processes tailored to the context of each sentinel site for influenza and other respiratory viruses.
- Prepared the COVID-19 epidemiological bulletin in Guatemala one year into the pandemic, with analysis of surveillance data and construction of indicators.
- Worked with the MoH on COVID-19 mortality surveillance activities in the country: investigation of deaths reported to be caused by or accompanied by COVID-19, and construction of the national database of death records, with consideration of the global recommendations for the classification and registration of deaths due to COVID-19. Developed an interactive dashboard to evaluate the performance of sentinel surveillance sites for influenza and other respiratory viruses.
- Provided technical assistance to the MoH for the design and implementation of research on the use of antigen tests in the context of the COVID-19 case and contact tracing strategy in two of the country's health areas.

- Conducted a technical mission with the support of the regional team of the Infectious Threats Management Unit to jointly review the surveillance and laboratory system for influenza and other respiratory viruses, including SARS-Cov-2.



Points of entry, international travel, and transport

- Supported the authorities and relevant government institutions in identifying designated COVID-19 facilities, managing points of entry, and working with individuals returning from abroad.
- Supported the MoH in the planning and implementation of a simulation exercise to prepare for the response to outbreaks.
- Supported the MoH in discussions with counterparts and other stakeholders and in preparing a technical document with public health considerations to resume international traffic.
- Provided cooperation to the MoH for the preparation of guidelines for reopening points of entry (land and air border crossings).
- Supported the updating of national plans and guidelines for the health response to events involving the mass flows of migrants in the context of COVID-19.



National laboratories

- Conducted training on laboratory response through subregional training in Mexico.
- Provided primers, probes, enzymes, and kits to conduct PCR tests.
- Assisted the National Health Laboratory in the analysis and evaluation of delays in the processing of samples and the flow of information with other laboratories.

- Supported the MoH in the integration of Guatemala into the regional network for genomic surveillance of the COVID-19 virus in the Americas.

- Strengthened diagnostic capacities (with the purchase of equipment, supplies, and reagents and training) for the detection of SARS-CoV-2 in the national laboratory and three sentinel laboratories for respiratory viruses.

- Supported the National Health Laboratory by sending samples for SARS-CoV-2 genomic sequencing to the reference laboratories (Fiocruz in Brazil and Gorgas in Panama).

- Supported the preparation and uploading of SARS-CoV-2 sequencing data to the Global Initiative on Sharing All Influenza Data Platform (GISAID).

- Designed the bioinformatics pipeline for the analysis of data obtained from the local sequences.

- Provided management and support for national laboratory staff to participate in the 25th International Bioinformatics Workshop on Virus Evolution and Molecular Epidemiology in Fiocruz, Brazil.

- Provided supplies and reagents to support sample screening for preliminary identification of viruses of concern.



Infection prevention and control and protection of the health workforce

- Advised in the assessment of temporary facilities for people with COVID-19 in Guatemala City and 51 hospitals (including five temporary hospitals).

- Provided IPC training to 3,697 health workers, 420 medical students at the Universidad de San Carlos, and others.

- Together with the Guatemalan Association for Infectious Diseases and the CDC, designed a free online course on COVID-19 prevention, control, and management. Three thousand health professionals

participated, and staff were trained in three hotels designated for managing cases.

- Supported the country with the donation of PPE, including masks, disposable gowns, gloves, surgical masks, N95 masks, and goggles.
- Provided technical support to national and subnational health authorities in establishing triage, isolation, and the strengthening of IPC practices in 22 priority health facilities in the framework of COVID-19.
- Trained 105 water, sanitation, and hygiene inspectors in health facilities at 29 health area directorates with the PAHO/WHO WASHPRESS tool (WASH solutions and IPC measures for health facilities' preparedness and response to health emergencies and disasters).
- Conducted 108 evaluations of water, sanitation, and hygiene services at health facilities in 22 health districts to improve essential health services, especially as related to WASH.
- Provided technical support at the subnational level to boost the capacity of hospital IPC programs and committees to prevent the transmission of infections associated with health workers and patient care in COVID-19 and other outbreaks, and to minimize the impact of the pandemic on health facilities and their personnel.
- Strengthened the capacities of health personnel in infection prevention and control practices in the context of COVID-19. This included writing and reproducing guides for health workers in priority hospitals and providing training for them on sterilizing and disinfecting equipment and IPC in patient care.
- Trained more than 10,000 people in the handling of dead bodies, through the virtual course developed in coordination with the MoH, the INACIF School of Forensic Sciences, and the ICRC.



Case management, clinical operations, and therapeutics

- Provided guidance on preparing staff in health facilities to treat infected persons and for intensive care.
- Trained more than 100 health workers on pre-hospital emergency services and 1,458 people in case management and the reorganization of health services.
- Helped the MoH to apply the readiness checklist in 22 hospitals to expand health services.
- Advised the Guatemalan Institute of Social Security on the evaluation and organization of its services, including the use of hotels for the management of patients with mild symptoms.
- Supported the MoH in developing technical guidelines for costing health services related to COVID-19 and adapting the PERC (production, efficiency, resources, and costs) tool for hospitals.
- Provided information on the extent of hospital preparedness and on plans to strengthen the COVID-19 response as part of the reorganization of the national health services network.
- Provided technical cooperation to the national regulatory authority to strengthen the monitoring and regulation of new COVID-19 vaccines and medicines.
- Provided technical cooperation for a comprehensive approach to the health of hospital workers, training 41 management teams from eight hospitals, as well as 575 participants, in a number of workshops and 10 webinars, where a comprehensive approach to occupational and mental health was addressed.
- Supported the drafting of contingency plans for a comprehensive approach to occupational health at the national level and in three priority hospitals.

- Provided diagnosis, care, individual and collective support, and psychological first aid for personnel from hospitals in the national network who provide COVID-19 care.
- Conducted a study to describe clinical and epidemiological realities associated with COVID-19 in two hospitals.
- Strengthened the problem-solving capabilities of hospitals by updating and implementing protocols, flowcharts, and algorithms for the hospital care of moderately to severely ill adult, obstetric, pediatric, and neonatal patients.
- Trained 1,771 medical workers in the national network on updating and standardizing the management of adult, obstetric/gynecological, pediatric, and neonatal cases.
- Conducted five webinars featuring specialists from scientific associations to provide updating on COVID-19 case management and lessons learned to public and private health sector personnel at the national level.
- Developed and implemented the hospital bed management tool adapted to Guatemala for the country's national hospital network, providing daily records of COVID-19 occupancy and general and specialty hospitalization.



Operational support, logistics, and supply chain

- Provided training on the use of tools to calculate supply, medication, and PPE needs.
- Provided support on logistics and incident management, as well as procurement mechanisms.
- Facilitated the clearance and distribution of donations of oxygen concentrators, as well as PPE, COVID-19 tests, reagents, and other related supplies for COVID-19.

- Facilitated the distribution of personal protection supplies for health workers in the hospital network.
- Promoted coordination in logistics management and hospital coordination units to improve the logistical and cold chain aspects of 12 hospitals in the national network.
- Provided personnel from the MoH Logistics Management Unit with training on the PAHO/WHO Regional Stock System (SISTOCK) course to strengthen logistical response capacity for the handling of COVID-19 supplies.
- Prepared the catalogue of reagents for MoH clinical laboratories and blood banks and updated the MoH catalogue of surgical and curative medical supplies for the COVID-19 context.
- Held a workshop to estimate the need for medicines, surgical supplies, and laboratory reagents in 2022.
- Provided the MoH with PPE, cold chain management equipment, and three deep freezers to facilitate the proper storage and handling of COVID-19 vaccines at the National Biologics Center.



Maintaining essential health services during the pandemic

- Provided technical support on COVID-19 medical care to 46 hospitals, supported the creation of temporary hospitals, and offered guidance on planning for human resources for health.
- Promoted measures to protect people in conditions of vulnerability from COVID-19, including people with disabilities, pregnant women, newborns, migrant populations, etc.
- Supported the Health Cluster subgroups in preparing work plans for the continuity of essential services.
- Provided technical support to the MoH to strengthen the capacities of health workers, area managers, and hospitals in mental health and psychosocial support in the context of COVID-19.

- In coordination with the MoH, supported the development of a virtual course to train health personnel to implement sociocultural measures for the prevention, containment, and management of COVID-19 cases at the community level in indigenous populations of Guatemala.
- Supported the MoH in organizing and strengthening primary care for the COVID-19 pandemic response, prioritizing the most vulnerable health services and focusing on the continuity of essential programs.
- Within the framework of the Health Cluster and its working subgroups, supported the completion of analyses of the impact of COVID-19 on the continuity of essential services, in particular: TB, HIV, and malaria; mental health; maternal and sexual and reproductive health; and indigenous peoples.
- In coordination with the Nutrition Cluster, coordinated discussions among national and international experts and national authorities on breastfeeding and COVID-19.
- Trained 4,600 professionals in maternal and newborn, adolescent, and youth health, and family planning and contraception, together with UNFPA, UNICEF, and Tula Salud, to minimize the risk of the interruption of essential services during the COVID-19 pandemic.
- Supported the country in developing strategies to address health issues arising from migrants, asylum seekers, and persons returning from abroad, and measures to protect other persons in conditions of vulnerability, such as persons with disabilities and pregnant women.
- Supported the MoH in developing plans for the prevention of teenage pregnancy in the context of the COVID-19 pandemic. A document was also prepared to analyze the impact of COVID-19 on sexual and reproductive health, with emphasis on maternal and neonatal health, and to strengthen the continuity of essential maternal and child services.
- Supported the MoH Blood Bank in developing strategies for voluntary donation and access to blood during the pandemic.
- Provided training for health workers, using the mhGAP, psychological first aid (PFA), and AUDIT (Alcohol Use Disorders Identification Test) tools, and developed operational plans for health area directorates.
- Provided technical support to the MoH in updating the Comprehensive Early Childhood Development Policy 2010–2020 in the context of the COVID-19 pandemic.
- Provided technical support to the Comprehensive Child Health Program and the Adolescence and Youth Program to strengthen comprehensive care for children and adolescents in the context of COVID-19.
- Documented the operational processes of maternal, neonatal, and infant care at the primary and secondary levels and optimized the flows of these processes to improve quality, access, and coverage in the continuity of essential services for maternal, neonatal, and child health and reduce maternal and neonatal mortality in priority municipalities in the context of the pandemic.
- Updated Integrated Management of Childhood Illness (IMCI) for implementation in health services at the clinical and community level for maternal, neonatal, and child health in the context of COVID-19.
- Worked on promotional material and a voluntary blood donation campaign during the pandemic to ensure uninterrupted access to essential services.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Established a national committee to support the introduction of the COVID-19 vaccine, with the participation of the private sector, medical associations, and other UN agencies.
- Supported the development of a National Vaccination Plan with phases organized by priority groups to incorporate evidence-based recommendations on heterologous vaccination schemes, boosters, additional doses, etc.
- Supported the design and implementation of plans for training staff in 29 health areas for the nationwide COVID-19 vaccination campaign. This included subjects such as vaccine handling, information and documentation systems, and surveillance of adverse events following immunization.
- Supported revision of the surveillance protocol for measuring the effectiveness of the COVID-19 vaccine and the impact of its introduction.
- Provided support to the National Immunization Program to prioritize groups for the COVID-19 vaccine, diagnosis, and estimates of the need for vaccines and supplies, personnel, cold chain requirements, and logistics. In addition, supported the analysis of daily and weekly coverage and the publication of interactive digital dashboards and vaccination reports¹ for timely monitoring of the vaccination campaign.
- Facilitated coordination and dialogue between health authorities and strategic partners and allies of the UN system, bilateral agencies, and other cooperation agencies to support the introduction of COVID-19 vaccines.
- Provided technical guidelines for adaptation of the manual on ESAVI surveillance to the national context. A national committee was formed to evaluate serious adverse reactions to vaccines, strengthening vaccine safety surveillance capacities and the preparation of analytical reports on vaccine uptake and monitoring.
- Supported the Epidemiology Department in measuring the impact of the first phase of the vaccination campaign in Guatemala.
- Through regional managers, assisted staff at the health directorates in training activities, guidance on and use of microplanning tools, training and implementation of AEFI surveillance, and logistical support related to COVID-19 vaccines.
- Promoted collaboration between MoH authorities and ancestral authorities of the Maya, Xinka, and Garifuna communities to strengthen the involvement of community leaders in promoting COVID-19 vaccination, especially in departments notable for low coverage.
- Supported the Vice Ministry of Hospitals in the application of a tool to determine the cost of the National Vaccination Plan 2021–2022.

¹ https://gtmvigilanciacoVID.shinyapps.io/Coberturas_Tablero/
<https://tablerocovid.mspas.gob.gt/>



Guyana



Country-level coordination, planning, and monitoring

- Assisted with the development of the COVID-19 Preparedness and Response Plan; developed guidance for subnational preparedness and response plans; contributed to a risk assessment of COVID-19 public health and social measures.
- Supported activation of the Health Emergency Operations Center (HEOC); revised the terms of reference and standard operating procedures; and assisted in daily reporting. Assisted with the expansion of the HEOC by providing IT equipment and furniture.
- Supported the HEOC to conduct sensitization sessions on COVID-19 in all administrative regions.
- Supported the coordination of the health sector with national EOCs and those of other partners. Supported the decentralization of HEOC to selected regions and provided needed equipment.
- Assisted the Measures Assessment Committee in monitoring phases throughout the pandemic.
- Coordinated with the Georgetown Public Hospital Corporation (GPHC) and the McMaster University School of Medicine to launch a Community of Practice to weekly review suspected and confirmed COVID-19 cases and other complications. This initiative began with four Administrative Regions and was later expanded to all regions.



Risk communication and community engagement

- Assisted in the preparation of the national risk communication plan. Subsequently, updated the action plan to include activities related to COVID-19 vaccination.
- Held periodic press conferences with the local media in collaboration with government authorities.
- Assisted with the development and distribution of information and communication materials. Provided technical support for the production of COVID-19 ads on television and in print for all 10 regions.
- Conducted COVID-19 sensitization sessions with UN staff.
- Provided technical assistance, information, and materials for the inclusion of COVID-19 facts in a sitcom production.
- Coordinated a social media campaign with the MoH on the facts and myths surrounding COVID-19, with live Q&A.
- Developed an MHPSS information and communication campaign for the public and selected target groups.
- Helped develop a campaign with IEC (information, education, and communication) materials for the rollout of the vaccination campaign.
- Conducted capacity-building training for staff of the MoH public relations and communications units.



Surveillance, rapid response teams, and case investigation

- Conducted training on contact tracing and case definitions.
- Provided support for the implementation of Go.Data for case management, contact tracing, and follow-up. Installed and configured Go.Data in the Surveillance Unit and provided training.
- Provided technical support and training on epidemic modeling to define potential disease scenarios and the implications of adopting, adjusting, and lifting social distancing measures.
- Produced a weekly Epidemiological Bulletin; analyzed data; and prepared a report on the transmission rate.
- Analyzed data and provided advice on testing rates and a modeling of the expected evolution of the pandemic in two remote regions.
- Developed SOPs for epidemiological case investigation and trained trainers.
- Developed a protocol for a seroprevalence survey.
- Helped expand the number of field surveillance officers in selected regions and provided the tools and equipment needed for data collection and reporting.
- Prepared to strengthen the EIOS and EWARDS information systems to enhance the operations of the MoH surveillance unit.



Points of entry, international travel, and transport

- Identified and mapped official and informal points of entry (POE) and helped conduct a baseline assessment of key capacities and resources needed for the screening and referral of suspected imported cases.

- Assisted in the development of a POE screening tool and conducted training on case definitions.
- Provided technical support to estimate supplies, equipment, and PPE needs in order to create an isolation area at all official and informal POEs. Provided critical equipment to selected POEs.
- Defined the SOPs and algorithms for screening and testing all people entering the country through international airports in Guyana. Conducted site visits to selected POEs to provide on-the-job training for screening travelers.
- Supported the MoH in redefining rules for quarantine and isolation given the emergence of new COVID-19 variants.



National laboratories

- Provided critical laboratory supplies and training in theoretical aspects of molecular diagnostics. Expanded testing capacities by training an additional 50 medical technologists and medical personnel in the use of RDTs.
- Continued to provide technical support for the use of diagnostic equipment.
- Provided trouble-shooting support for testing procedures and sample collection.
- Helped to develop a costed list of supplies for diagnostic support.
- Supported the expansion of laboratory testing capacity in the hinterland regions.
- Procured test kits and PPE for surges in the hinterland regions.



Infection prevention and control and protection of the health workforce

- Conducted a Hospital Readiness Assessment as part of preparedness activities at the main referral hospital for COVID-19 in the country at the time.
- Provided training to improve IPC standards in isolation units at hospitals managing COVID-19 patients.
- Estimated the demand and cost of PPE required at all levels of care. Provided training on the rational use of PPE.
- Visited five hospitals with isolation capacity and provided guidance on IPC measures.
- Assessed the capacity of human resources to provide intensive care services in 10 administrative regions.
- Provided guidance to the MoH in the preparation of the national public health plan for COVID-19.
- Briefed the President on COVID-19 trends and the continuation of social distancing measures.
- Reviewed national guidelines for cleaning, sterilization, and disinfection in health care facilities.
- Supervised isolation and intensive care units with the MoH at all regional and national referral hospitals and made recommendations for improvement.



Case management, clinical operations, and therapeutics

- Supported the MoH in the use of modeling tools to estimate COVID-19 cases; helped create a modeling team to undertake this task.
- Supported the MoH in estimating the expected demand for hospital care and determined additional ICU and intermediate care needs; costed all additional resources needed at the country's new COVID-19 hospital.

- Supported the government in the preparation of the first national COVID-19 Clinical Guidelines and algorithms to manage patients at three levels of care (primary, secondary, tertiary).
- Implemented a regional survey on the impact of the COVID-19 response on general health services, using data from the country's four largest hospitals, 33 health centers, and all national health programs.
- Defined the SOPs and algorithms for the screening, testing, and clinical referral for all prisons and detention centers in Guyana.
- Implemented a regional survey on the impact of COVID-19 response on the drug supply chain, identifying gaps and stockouts of essential medicines at all levels of care.
- Supported the drafting of the new National Health Strategy for 2030 and included, for the first time, the strengthening of emergency response as a strategic goal.
- Conducted a review of the clinical characteristics, patient profiles, and clinical outcomes of all patients admitted to the ICU of the main COVID-19 referral hospital.
- Held training on death certification and ICD coding for medical doctors.
- Held training on clinical management and intensive care treatment for 45 doctors at all levels of care.
- Deployed an international mission to strengthen oxygen production and distribution across the country. Visited 18 regional and national hospitals and provided recommendations to the MoH for implementation.



Operational support, logistics, and supply chain

- Conducted an assessment of procurement processes; needs modeling; and the coordination of donations.

- Provided the country with additional PPE and COVID-19 test kits.
- Assisted with the coordination of supplies/needs through global procurement mechanisms.
- Procured cold chain equipment, including cold storage boxes, for the national and regional MoH authorities.
- Assisted with coordination mechanisms for the rollout of the COVID-19 vaccine, including procurement of supplies.



Maintaining essential health services during the pandemic

- Trained national authorities on key aspects of building national EMT capacity, techniques to estimate needs, and how to expand services.
- Prepared the new national package of essential health services for primary health care to be provided to all people in Guyana, in the context of the pandemic.
- Supported the design and adoption of a telemedicine initiative for access to maternal/child services.
- Adopted a national blood safety strategy and an operational plan to ensure that blood donation is safe and quality blood transfusion services are maintained in the context of the pandemic.
- Provided input into the design and adoption of mental health and psychosocial support (MHPSS) for affected populations and health workers.
- Developed an MHPSS response plan; resources for sustained implementation are being mobilized in collaboration with UNDP's Information, Education and Communication campaign.
- Commenced or continued implementation of priority activities in MHPSS for the general population, health care providers, students of the Master's in Psychology program at the University of Guyana, COVID-19 hotline operators, and frontline health workers.

- Established a multi-stakeholder Technical Working Group for MHPSS.
- Created the Safe Space 24/7 MHPSS hotline as a referral mechanism for individuals who require first-line and long-term mental health and psychosocial support.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Collaborated with the national task force at biweekly meetings to discuss the introduction of COVID-19 vaccines.
- Completed the National Deployment and Vaccination Plan and Roadmap for introduction of COVID-19 vaccines. Target groups were identified and include frontline health workers, persons with comorbidities, and persons aged 65 or older.
- Completed training on cold chain management for the vaccine. Provided technical assistance to create a national cold room in Region 6 and other ultra-cold storage facilities. National and regional assessments were conducted to ensure that ultra-cold storage temperatures are appropriate to maintain vaccine potency. Cold chain supplies (e.g., industrial temperature monitoring devices, vaccine carriers, and continuous monitoring temperature equipment) were procured.

- Completed and supported other training sessions:
 - ESAVI surveillance training for health care workers.
 - Training health workers by introducing the National Deployment and Vaccination Plan for COVID-19 through the Expanded Program on Immunization.
 - Trained trainers, with the MoH, on the administration of AstraZeneca, Pfizer, Moderna, Sinopharm, and Janssen COVID-19 vaccines. A total of 407 health workers were trained.
 - National training for public health professionals on events supposedly attributable to vaccination or immunization (ESAVI). The reporting tools were also updated to include the management of adverse events.
- Supported the rollout of the COVID-19 vaccines, including the development of a distribution plan for the eligible population in Guyana's 10 administrative regions. Target groups included frontline health workers and persons with comorbidities. The campaign was extended, based on the availability of COVID-19 vaccines, to persons aged 18 and over and school children aged 12 and over, using Pfizer vaccines. COVID-19 care packages (masks, sanitizers, handwashing liquids, disinfectants) were handed out during the COVID-19 vaccination campaign as a means of promoting good health and preventing the transmission of COVID-19.
- Implemented a public awareness campaign in 10 regions and the capital, Georgetown, that emphasized the fact that vaccination saves lives and is necessary to prevent the transmission of COVID-19. The aim was to counter misinformation and the myths surrounding COVID-19 vaccines by providing evidence-based information.
- PAHO assisted by providing much-needed resources, which included access to vaccines, IEC materials and infomercials, and health promotion and public awareness through social, print, and non-print media.
- Supported the development of strategies focused on health workers and the public on the prevention of COVID-19 in the regions with lower COVID-19 vaccination coverage due to vaccine hesitancy.



Haiti



Country-level coordination, planning, and monitoring

- Supported the National Emergency Response Unit of the Ministry of Public Health and Population (MSPP) to improve coordination between the central and departmental levels. Supported crisis cells at the departmental level to improve coordination and the response to COVID-19 and other crises, notably during the hurricane season.
- Supported the MSPP to continue using the crisis cell through 2021 (this was set up by the National Multisector Commission for Management of the COVID-19 Pandemic, whose mandate ended in 2020).
- Supported administration of the National Immunization Technical Advisory Group for COVID-19 Vaccination (GTTN) by organizing and providing technical assistance at the national level and through subcommittees.



Risk communication and community engagement

- Deployed field missions to train 3,000 community health workers in seven of the 10 departments in risk communications, preventive measures, contact tracing, and the continuity of essential health services.
- Translated educational materials into Haitian Creole and supported their countrywide distribution.

- Led coordination meetings with the MSPP and other partners to strengthen community response and engagement.
- Supported the Department of Health Promotion and Environmental Protection (DPSPE) and departmental health directorates in the community response to COVID-19 in public markets around the country.
- Convened a consultation with the Health Director of the Ouest Department and the Municipal Health Office (BCS) of Carrefour to organize training on COVID-19 for community health workers. Together with the DPSPE and Ouest Departmental Directorate, planned community-level support for the displaced population from the Bel Air neighborhood, considering their risk of infection.
- Conducted meetings in four departments with community leaders, including boards of communal sections, assemblies of communal sections, voodoo priests, pastors, and traditional birth attendants.
- Conducted community meetings with young people on COVID-19 risk prevention and reducing its impact on their health (early pregnancies, mental health, and GBV).
- Participated in the MSPP communications working group charged with preparing and validating a national communications strategy that includes risk communication and community engagement activities.
- Supported the MSPP's creation of a working group to monitor and quickly address rumors about COVID-19.



Surveillance, rapid response teams, and case investigation

- Supported the MSPP in developing plans to strengthen COVID-19 surveillance and response at the departmental level, including improving data management and information sharing. Supported data analysis teams in the country's 10 departments and at the central level to improve national information sharing systems.
- Supported the MSPP in developing a plan to detect COVID-19 cases and implement a strategic plan to rapidly detect cases at all 68 sampling sites.
- Trained 100 national health care workers at specimen collection sites.
- Supported the training of “call teams” for the epidemiological response to COVID-19 in three departments (Sud, Grand’Anse, Nippes). These teams are responsible for monitoring COVID-19 cases and contacts in each department and immigration flows at ports of entry during the COVID-19 pandemic.
- Supported the training of 330 epidemiological surveillance officers to detect and notify cases of COVID-19.



Points of entry, international travel, and transport

- Continued supporting the MSPP in screening incoming passengers at the airport in Port-au-Prince and Cap Haitien, as well as migrants returning to Haiti through the four main ports of entry on the border with the Dominican Republic. At Port-au-Prince airport, suspected cases were referred to the MSPP through a validated protocol for quarantine. Test results were provided to screened migrants, and PAHO assisted health authorities in informing migrants about COVID-19 and the respective prevention measures.
- Collaborated with international partners (IOM, UNFPA, UNICEF, and Zanmi Lasante/Partners in Health) to strengthen surveillance at the border

with the Dominican Republic. PAHO trained workers at four official points of entry in the use of antigen-based rapid diagnostic tests.

- Supported the MSPP to keep quarantine centers functioning at the borders with the Dominican Republic for observation and investigation of suspected cases, the collection of samples, and the referral of patients with a confirmed diagnosis.
- Distributed PPE to workers at the Ouanaminthe point of entry in the Nord-Est department.
- Trained field teams to use tablets to complete electronic forms and transfer data.
- Distributed masks for migrants at border crossing points and strengthened awareness messages during the two-day binational market (Ouanaminthe/Dajabon).



National laboratories

- Continued to support the MSPP in strengthening laboratory capacity by providing the necessary reagents and equipment (enzymes, internal control primers, PCR tubes, and extraction kits to support early testing and detection of COVID-19 cases) as part of the decentralization process. To date, eight regional laboratories (in addition to the National Laboratory and Gheskio) have the capacity to test for COVID-19 using the GeneXpert system.
- Supported the National Laboratory in developing an algorithm using Ag-RDTs to strengthen laboratory capacities at the regional sites; procured Ag-RDT tests kits to support scaling-up of COVID-19 testing nationally; and supported deployment of the tests to all 10 departments.
- Supported the sampling of suspected COVID-19 cases and the transport of samples to the National Laboratory, using 18 Labo-moto nurses who normally work with the sampling of suspected cases of cholera. Provided troubleshooting support for testing

procedures and sample collection. Conducted the validation process for the COVID-19 antigen-based rapid diagnostic tests.

- Provided external quality assessment panels to the National Public Health Laboratory and University Hospital of Mirebalais to monitor the laboratories' continued performance. Conducted supervisory visits to four sites (St. Luc, Grace Children, St. François, Anne Marie) in the Ouest department to evaluate and assess the system's performance.
- Assisted the Directorate of Epidemiology Laboratory and Research with the sequencing of approximately 50 samples collected from confirmed COVID-19 cases. Samples continue to be shipped to the Regional Reference Sequencing Laboratory at the Gorgas Institute in Panama. Twenty-eight new SARS-CoV-2 sequences collected from Haiti were processed at the Sequencing Reference Lab in Fiocruz, Brazil, part of the Genomic Surveillance Regional Network. These sequences have been uploaded and made available in the GISAID database.



Infection prevention and control and protection of the health workforce

- Visited 279 health institutions in Haiti and determined that 180 had a triage space and 113 also had an isolation space.
- Trained 1,830 staff from health institutions and ambulance services in the appropriate use of PPE for COVID-19 case management and from health institutions with triage and isolation capacities. In 2021, an additional 300 persons were trained in general IPC measures, in addition to ongoing technical training of health care workers during national IPC program assessments.
- Worked alongside Haiti's health authorities to

implement national IPC plans to reduce COVID-19 transmission at both the community and health facility level.



Case management, clinical operations, and therapeutics

- Continued supporting the MSPP in following up on the number of hospitalized patients, bed occupancy rates, gaps, and needs.
- Set up a medical call center with 24/7 service to follow up on suspected and confirmed cases of COVID-19 in home isolation.
- Conducted an assessment of hospitalization and care capacity in the Centre, Grand'Anse, and Ouest departments.



Operational support, logistics, and supply chain

- Purchased gloves locally, due to an initial worldwide shortage.
- Distributed early detection kits to 123 health institutions with triage and isolation capacity.
- Distributed PPE kits to 97 health facilities between July and December 2021.
- Provided logistical support for the transportation and distribution of vaccines and ancillaries in the 10 departments.
- Helped to order additional cold chain equipment (CCE) for the MSPP Immunization Program.
- Supported the training and implementation of SOPs related to the Pfizer COVID-19 vaccine and its requirement for ultra-cold storage.



Maintaining essential health services during the pandemic

- Conducted training sessions for health care providers working in emergency obstetric and newborn care services to manage pregnant COVID-19-infected patients (prenatal, labor and post-partum, family planning, GBV management) and for neonatal and infant care during the pandemic.
- Provided support to maintain and update the software of the GALILEO system at the national Blood Safety Program and trained laboratory technicians to ensure continuous availability of secure blood products during health crises and the pandemic.
- Provided technical guidance to the MSPP to develop a strategic framework document for district health units as part of the country's integrated health service delivery networks in the context of COVID-19.
- Informed community leaders about the continuity of services during the COVID-19 pandemic, with a focus on childhood illnesses, promoting maternal breastfeeding, and institutional births during the pandemic.
- Trained the departments' focal points for NCDs (diabetes, hypertension, and cardiovascular diseases) and provided the necessary medicines and supplies.
- Educated young people and adolescents about the concept of psychological first aid, using the booklet "Stronger Together" available in Creole and French.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization

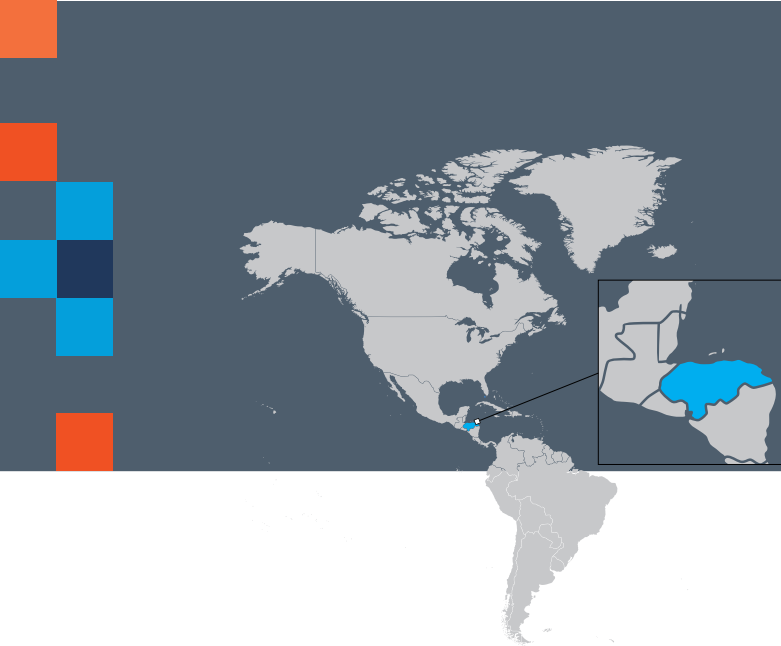
programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.

- Organized and supported supervision visits to vaccination sites in different departments.
- Supported the government's strategy to introduce the COVID-19 vaccine through GAVI's Advance Market Commitment (AMC):
 - Supported submission of the Vaccine Introduction Readiness Assessment Tool (VIRAT/VRAF WHO/World Bank) to assess the progress of vaccine rollout readiness.
 - Conducted an initial assessment using the Cold Chain Equipment Sizing Tool to assess gaps and needs in advance of receiving COVID-19 vaccines.
- Provided technical recommendations and guidance on regulatory preparedness and National Deployment and Vaccination Plans to administer COVID-19 vaccines in all 10 departments of the country.
- Provided access to training webinars and held workshops on events supposedly attributable to vaccination or immunization (ESAVI) surveillance in the Americas. Hosted and provided technical expertise for the training of vaccination supervisors at the central level to accompany the introduction of the COVID-19 vaccine.
- Provided technical support for the adaptation of data collection and compilation tools, data management activities, including training and supervision of actors at all levels, and for the analysis, development of visualization, and preparation of periodic technical reports for stakeholders.
- Supported the development of educational materials for training vaccination teams. Developed FAQs and



communication materials (in French and Creole) to advertise the availability of COVID-19 vaccines and promote their benefits. Supported the MSPP Communications Unit in the rollout of a mass communication campaign with the production and dissemination of radio and TV spots on COVID-19 vaccination.

- Supported management of the cold chain for the Moderna vaccine at the central and departmental levels.
- Provided training on COVID-19 vaccines to the National Immunization Technical Advisory Group (NITAG).
- Secured the reception, customs release, and delivery of COVID-19 vaccines and ancillaries to the central warehouse of PROMESS.
- Supported the organization of four vaccination promotion events in the Delmas commune.



Honduras



Country-level coordination, planning, and monitoring

- Collaborated with authorities to prepare and update the COVID-19 Preparedness and Response Plan and then update the COVID-19 Pandemic Containment and Response Plan.
- Facilitated the visit of a mission of experts on health systems for emergencies and the protection of health workers.
- Helped national authorities mobilize resources to support the response.
- Supported national health authorities in the planning and adaptation of health services in priority areas.
- Fostered coordination between national and international partners and health authorities to support the response.
- Promoted the inclusion of mental health in the country's response to COVID-19, establishing coordination mechanisms on mental health and psychosocial support. Coordinated efforts with the health cluster and UN agencies on mental health.
- Supported the mobilization of resources to manage the pandemic and the coordinated execution of multiple funds, both domestic and from international cooperation.
- Coordinated the Health and Reform Partners Roundtable (CESAR) and helped align partnerships

and international cooperation to meet health sector needs during the pandemic and emergencies caused by natural phenomena, in addition to mobilizing resources and prioritizing life-saving actions.

- Established six field offices to provide direct individualized support to meet the response and prevention needs associated with new COVID-19 infections.
- Analyzed the operations of the Referral and Response System (SINARR) in five departments, principally focusing on maintaining care for COVID-19 patients.
- Developed instruments for monitoring COVID-19 cases that have been used in the different health regions.
- Provided timely guidelines and recommendations from WHO and PAHO for addressing the pandemic in all pillars.



Risk communication and community engagement

- In collaboration with UN agencies and the Secretariat of Health, developed and implemented the risk communication strategy and plan and the communication plan for introducing the vaccine.
- Facilitated media briefings alongside counterparts, strengthened the capacities of journalists and communicators in health facilities, and reached a

general audience with messages and training courses through social media (Facebook, YouTube, Twitter).

- Translated risk communication materials on COVID-19 infection prevention and biosafety measures into indigenous languages and supported the development of communication materials for the Secretariat of Health.
- Supported training efforts in priority municipalities to improve care, using innovative tools, dialogues with indigenous communities, and the strengthening of volunteerism, as well as risk communication for health promotion and disease prevention.
- Expanded the community health strategy to heighten risk perception and increase participation in disease prevention with a focus on COVID-19, training more than 1,100 community health promoters in priority regions of the country, directly or indirectly reaching over 1.5 million people.
- Trained around 500 regional communicators, health promoters, and collaborating volunteers in risk communication and community mobilization.
- Developed and disseminated communication pieces tailored to the community (flipcharts, radio spots, posters, flyers for journalists) to cover larger segments of the population.
- Supported dissemination of the guide and procedures for COVID-19 prevention in senior centers.
- Strengthened capacities for risk communication and community participation in young leaders of the Garifuna community.
- Developed print and social media communication pieces to promote vaccination among priority groups: pregnant women, older persons, and people eligible for second doses.



Surveillance, rapid response teams, and case investigation

- Supported the country in improving strategic planning, using existing epidemiological data, models, and statistical projections.
- Deployed surveillance teams to the most affected departments to support and train rapid response teams (RRTs). Designed a course for RRTs to expand their coverage.
- Worked with authorities to tailor surveillance, laboratory, and case management guidelines and protocols to the country's context. Conducted training, together with GOARN, on the use of Go.Data for contact tracing.
- Provided technical and financial support for integrating COVID-19 surveillance into the SARI/ILI surveillance system, using a single information system (PAHO-Flu). Created situation rooms in each health region and trained staff at sentinel sites.
- Hired epidemiology consultants to carry out technical cooperation in priority networks.
- Strengthened the capacity of the Health Surveillance System (SVS) by providing technical support and equipment to improve the information systems of health regions.
- Strengthened the capacities of health personnel by providing pharmacovigilance guidelines for the COVID-19 vaccine.



Points of entry, international travel, and transport

- Worked with multisector authorities to adapt points of entry to the IHR, providing training, guidelines, equipment, risk communication materials, and PPE.

- Collaborated on the strategy to reopen airports and border points and maintain surveillance of travelers entering the country.
- Provided equipment and materials to the country International Health Office's points of entry to improve compliance with the IHR.



National laboratories

- Strengthened laboratory capacity to improve timely detection, case traceability, and the ability to locate contacts by establishing the Network of Molecular Biology Laboratories in collaboration with international partners, thus quadrupling the country's laboratory capacity.
- In addition, developed a barcode-based system for recording laboratory tests that connects to the national information system to guarantee the reliability of patient test results.
- Donated supplies for PCR diagnostic tests and provided training to the virology laboratory on timely RT-PCR testing. Also provided reagents, antigen tests, and other supplies essential for timely detection of COVID-19 cases.
- Provided support and advice for maintaining laboratory equipment through the acquisition of materials and supplies and the repair of existing equipment.
- Provided support through the World Bank to strengthen the health network in the Department of Comayagua; seven health facilities were upgraded and equipped, benefiting residents in 21 municipalities in Comayagua.



Infection prevention and control and protection of the health workforce

- Delivered PPE and hygiene supplies to hospitals and health centers, health institutes, adult care facilities, municipal offices, and NGOs.
- Designed courses for health workers on priority topics, in addition to widely disseminating courses developed by PAHO and WHO. To date, 25,000 people have been certified through these courses.
- Trained health professionals, NGOs, government officials, and other partners on IPC.
- Distributed more than 90 PAHO and WHO guidelines, protocols, and recommendations for managing the pandemic.
- Developed evaluation guides and communication materials for the comprehensive rehabilitation of people stricken with COVID-19.
- Strengthened the infection prevention and control programs and the hand hygiene program in priority hospitals by providing technical cooperation for updating and improving the IPC Improvement Plan in these hospitals.
- Trained health personnel on biosafety measures and pharmacovigilance guidelines in accordance with the National Plan for Introduction of the COVID-19 vaccine.
- Strengthened the Pharmacovigilance Unit of the Secretariat of Health by supporting training and the production of technical documents that helped this unit perform its national functions.
- Repaired and equipped three health situation rooms for analysis and monitoring of pharmacovigilance information on adverse events following immunization (AEFI); one room was located in the pharmacovigilance department and the others in two sentinel hospitals (the main national referral hospital and a hospital for maternal and child care).



Case management, clinical operations, and therapeutics

- Strengthened infrastructure and the oxygen supply network in priority hospitals and at case detection and stabilization facilities in order to improve the response to the emergency.
- Advised health workers in the health network on the treatment of persons with COVID-19.
- Prepared courses for the PAHO Virtual Campus for Public Health and YouTube on home care for confirmed or suspected COVID-19 patients with mild symptoms (145,000 views) and another on the care of pregnant women, those in labor, and the puerperium.
- Through courses available on the PAHO Virtual Campus for Public Health, certified 5,565 people in courses on infection management, occupational health, basic precautions, use of PPE, and more.
- Donated medical instruments and equipment for case management.
- Mobilized teams of health workers for the early detection of cases to improve care in departments with high incidence and case fatality.
- Supported the improvement of conditions and capacity-building for health personnel dealing with COVID-19 patients in triage units and hospitals.
- Analyzed and budgeted interventions to improve the installed capacity of oxygen supply facilities in the country's hospitals.
- Updated treatment guides at the primary and secondary care levels and held in-person training sessions on appropriate use of oxygen and support equipment in intermediate and intensive care wards.



Operational support, logistics, and supply chain

- Analyzed the evolution of the pandemic on an ongoing basis and provided recommendations for the best approach.
- Supported modeling efforts to project the impact of the pandemic for planning purposes. Provided planning tools for estimating the number of beds, PPE, equipment, and supplies.
- Supported the Secretariat of Health in planning, resource mobilization, and costing and procuring supplies, and provided financial support to procure PPE. Collaborated on the design of priority projects, helped mobilize resources, and collaborated on implementation.
- Contributed to the sustainability of the supply chain by purchasing through the PAHO Strategic Fund and the WHO Procurement Platform.
- Entered into an agreement with the Secretary of Health to equip health services to deal with the pandemic through the provision of equipment and PPE, the purchase of ambulances and laboratory supplies, specialized technical cooperation, and other forms of support.
- Strengthened the second level of care with clinical training and the provision of personal protective and biosafety equipment, biomedical equipment, antigen tests, and other supplies. Priority was given to obstetric and maternity wards, clinical laboratories, and COVID-19 wards.
- Analyzed the extent to which antigen tests for the diagnosis of SARS-CoV-2 are being used in Honduras.
- Assessed the capacity in network hospitals to manage biomedical equipment.

- Standardized the organization and operationalization of primary care services for suspected or confirmed COVID-19 cases in the national network.
- Updated and standardized the basic requirements for medical equipment and supplies for the care of COVID-19 patients.
- Installed six telehealth wards in addition to two referral hospitals and provided them with basic equipment and personnel trained to use it.
- Conducted a national assessment of the processes involved in needs estimates, procurement, and the distribution of personal protective equipment, medicines, and other important supplies for the care of COVID-19 patients.
- Measured the availability of essential tracer medicines at the primary and secondary care levels.
- Strengthened biosafety for national and regional warehouse personnel who deal in cold chain management.
- Procured supplies for handling COVID-19 vaccines that require ultra-low temperature storage, such as cryogenic gloves and aprons, laser thermometers, and voltage protectors used in refrigeration equipment for storing vaccines.



Maintaining essential health services during the pandemic


- Advised on maintaining logistical systems and the cold chain for routine vaccination programs and services for maternal and mental health, dengue, and diabetic patients during the pandemic.
- Equipped and jumpstarted remote telehealth centers in 22 municipalities in four health regions and six telehealth operations centers in network reference hospitals.
- Helped develop and conduct training on guidelines and protocols for the protection of mental health and psychosocial support.

- Completed the safe hospitals and capacity-building project for the treatment of dengue in priority regions, the results of which are contributing to the management of COVID-19 patients.
- Supported the development and implementation of a multimodule web-based epidemiological surveillance platform for the management of COVID-19 data, connecting molecular biology laboratories in order to record COVID-19 and other diagnostic tests at the national level, with epidemiological situation rooms in all health regions.
- Analyzed the operations of the Integrated Health Services Networks in the five departments with the highest maternal mortality in the context of the COVID-19 pandemic.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Advised health authorities on the preparation of a national plan for the introduction of COVID-19 vaccines and participated in the national integration team for introducing and providing vaccine access.
- Maintained continuous technical cooperation to support the rapid deployment of vaccines, strengthening of the cold chain, and the provision of needed supplies and mobilized financial and technical resources to support vaccination.

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- Facilitated the coordination of international cooperation with a view to joining forces to bolster national efforts to meet vaccination goals as quickly as possible.
 - Provided technical cooperation for the Vacunación mass vaccination campaign. The Vacunación (“vaxathon”) is a mass vaccination strategy that had a significant impact on vaccination coverage and the reduction of COVID-19 cases and hospitalizations throughout the country.
 - Launched a series of studies and protocols to analyze the rate of reinfection among health personnel, the cost-effectiveness of the vaccine, and adverse events following immunization (AEFI) in the post-introduction stage of the COVID-19 vaccine in the country’s health regions.
 - Formulated recommendations on the development of technical and operational guidelines for the deployment of COVID-19 vaccines.
 - Helped design training for health workers and regional, municipal, and local authorities to implement the plan and developed guidelines for the introduction of the vaccine.
 - Provided technical cooperation to the Expanded Program on Immunization for the design and implementation of a real-time COVID-19 vaccination monitoring system that provides daily information on the number and type of vaccines administered.



Jamaica



Country-level coordination, planning, and monitoring

- Bolstered technical cooperation with relevant ministries, departments, and agencies; maintained partnerships with the UN system and the National Emergency Management Organization, in addition to leading the UN health sector response and working with the Foreign Ministry on health sector efforts with multilateral partners and foreign missions.
- Maintained a high level of engagement with the Prime Minister, Cabinet, and Senior Executives of the Ministry of Health and Wellness (MoHW), including the Minister of Health, Permanent Secretary, and the Chief Medical Officer.
- Provided technical leadership for health by coordinating the development of response strategies, including resource mobilization.
- Collaborated with the national disaster mechanism led by the Prime Minister to provide guidance on health preparedness/response/recovery.
- Functioned as the technical lead for health within the UN Country Team (UNCT) and Donor Group, and as UN COVID-19 Coordinator. Led the development, in collaboration with UN staff, of the local UN Duty of Care system, including medical evacuation guidelines for COVID-19.
- Collaborated with multidisciplinary and multisectoral teams from the MoHW to implement policies, programs, and plans through the development and finalization of the mandatory IHR States Party Self-Assessment Annual Report (SPAR) and the annual monitoring questionnaire for the Plan of Action for Disaster Risk Reduction 2016–2021.
- Provided ongoing technical guidance on the monitoring of COVID-19 response to maintain standards across the 10 pillars; facilitated coordination across the public and private health sectors and at the national and subnational level for the provision and redeployment of critical resources. Led the gap analysis and the development of lists of priority resource needs.
- Supported the MoHW with the procurement and distribution of equipment and supplies, such as laboratory supplies, health emergency operations equipment, medical equipment and supplies for isolation areas, ICU beds, VHF radios, mobile phones, satellite phones, digital thermometers, hand-held non-contact infrared scanners, laptops, and tablets.
- Facilitated the introduction by the MoHW of mechanisms to coordinate and monitor various aspects of the COVID-19 response, including clinical management such as bed management, through capacity-building at the national and subnational level, including modeling exercises using EpiEstim.
- Provided technical support for implementation of the COVID-19 Response Plan and budget for health resource mobilization.

- Provided technical guidance on the prioritization and implementation of recommendations formulated following an assessment of critical areas of the COVID-19 response.
- Provided staff support to the MoHW Emergency Operations Center (EOC) with 24-hour technical guidance and support.
- Maintained consistent dissemination of up-to-date technical information across sectors. Conducted briefings with health teams daily, weekly, and bi-monthly on the coordination of response operations.



Risk communication and community engagement

- Produced a video on home quarantine and isolation for COVID-19 in support of the MoHW's national health promotion and community engagement programs.
- Produced videos on mental well-being/coping with stress during isolation, print material for travelers and material on other key health issues, including breastfeeding in the context of COVID-19, championing health care workers in support of International Nurses Day, and blood donations.
- In collaboration with UNICEF, produced infographics tailored to pregnant women and nursing mothers and two videos tailored to seniors.
- Produced a one-pager on smoking cessation: "COVID-19 is no joke, it gets worse with smoke."
- Conducted a rapid risk assessment of communication needs for vulnerable groups to inform risk communication strategies in advance of changes in public health and social distancing measures.
- Supported the production of weekly "Ask the Experts" Facebook Live sessions.
- Supported training for journalists on responsible reporting on COVID-19.



Surveillance, rapid response teams, and case investigation

- Collaborated with the MoHW to identify epidemiological transition to community transmission.
- Provided equipment to support field epidemiology/ data collection in priority parishes.
- Trained health care workers on the WHO surveillance protocol for SARS-CoV-2.
- Trained national and field teams to use Go.Data and provided 25 tablets to expand contact tracing.



Points of entry, international travel, and transport

- Provided support and technical guidance to strengthen border health security through enhanced IHR core capacities at designated and contingent designated points of entry for the introduction of travel measures, surveillance, and response.
- Worked with the MoHW to reinforce training on IHR compliance for port health officials, immigration, customs, Jamaica Constabulary Force, and the Jamaica Defence Force at points of entry, in the context of COVID-19.
- Collaborated with the MoHW to provide technical guidance on procedures at points of entry when borders reopen to international travelers and on designating appropriate areas for screening, quarantine, and isolation. Equipment and supplies were provided to ensure evidence-based decision-making on approvals for landing status of travelers.
- With the MoHW, co-hosted six strategic planning meetings of the multisector, multidisciplinary IHR Stakeholders Advisory Group, producing a redefined Action Plan for IHR implementation and expansion of the repository of data and information. These meetings were attended by representatives from all ministries, departments, and agencies, the airports

and port authorities, and the Jamaica Defence Force and reinforced their roles within the IHR in the context of COVID-19.



National laboratories

- Provided technical advice and material to the MoHW and other national authorities to update the COVID-19 testing strategy and review the National Influenza Center's testing protocols.
- Expanded laboratory testing modalities by providing rapid antigen diagnostic test kits and readers for the National Public Health Laboratory, National Influenza Centre, and hospital laboratories and treatment areas.
- Strengthened laboratory capacities by providing enzymes, internal control primers, PCR tubes, and extraction kits to support early testing and detection.
- Strengthened laboratory capacities through training in theoretical aspects of molecular diagnostics and troubleshooting support for testing procedures and sample collection.
- Supported genomic sequencing at PAHO/WHO Collaborating Centers, providing technical guidance on appropriate sample selection and facilitating arrangements for the safe transportation of samples internationally.



Infection prevention and control and protection of the health workforce

- Revised the National Strategy for Infection Prevention and Control (IPC) to address COVID-19.
- Provided IPC recommendations for the use of non-traditional facilities as quarantine and treatment centers.

- Facilitated capacity-building in the public and private health sector by sharing information among networks across the Caribbean, using PAHO/WHO webinars on IPC and other training opportunities.



Case management, clinical operations, and therapeutics

- Produced a Concept Note on the National Policy on Research for Health and submitted it to the MoHW and the Government Cabinet. Developed an essential health research package for the COVID-19 response, including support for participation in the WHO Solidarity Trial and COVID-19 modeling
- Facilitated on going capacity building, sharing PAHO/WHO technical guidance documents and providing access to webinars with the MoHW Panel of Clinical Care Experts and clinical care management team and networks, including the private sector and academia, on advancements and new developments in case management and therapeutics.
- Facilitated the completion and submission of the MoHW EMT National Response Matrix and capacity-building of EMT Coordinators and Health EOC teams at the weekly PAHO EMTignite webinars on critical aspects of the clinical management of COVID-19 cases and deployment of EMTs.
- Provided technical advice to national counterparts to identify and retrofit potential isolation and quarantine facilities and establish alternative medical care sites (AMCS).
- Collaborated with the MoHW to train managers and staff from 14 infirmaries, including on stressors faced by the elderly and self-care.
- Remained embedded in the MoHW EOC, supporting the updating of standards for clinical care, including therapeutics, quarantine, and isolation facilities.
- Developed guidelines aimed at keeping businesses/offices safe for returning workers.



Operational support, logistics, and supply chain

- Procured priority medical equipment and supplies, including PPE, laboratory supplies, and surveillance equipment and supplies for the MoHW.



Maintaining essential health services during the pandemic

- Provided technical support for primary health care reform, with the three-tier reorganization of health centers and the development of comprehensive health centers with higher referral capacity.
- Supported an assessment of mental health and life skills services provided to school-based adolescents by UN agencies and other NGOs. Supported school-based adolescents with train-the-trainers sessions for 46 persons. Provided access to training in psychological first aid for community health workers through PAHO's Virtual Campus for Public Health.
- Supported upgrading of the information infrastructure in 110 health facilities.
- With the MoHW and the regulatory agency to share crisis management guidance.
- Supported the national health authorities with the routine national immunization program. Supported the procurement of vaccines and cold chain equipment and supplies through the PAHO Revolving Fund for Vaccines, using annual demand planning.
- Provided guidance/support in nutritional management/breastfeeding during COVID-19.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Supported the updating of the Integrated Surveillance Information System (ISIS) and the electronic Joint Reporting Form (eJRF) for vaccines.
- Supported implementation of the COVID-19 vaccination program. Provided ongoing technical assistance and PAHO/WHO technical updates on the evolving COVID-19 pandemic.
- Facilitated preparation of the Vaccine Introduction Readiness Assessment Tool (VIRAT), including planning and budgeting.
- Supported capacity-building by providing training for national immunization staff on vaccine efficacy, safety, logistics, cold chain strengthening, waste management, vaccine surveillance, and management and set-up of immunization and ESAVI stations.
- Provided FAQs and other communication resources in support of national demand planning and the prioritization of target groups.



Mexico



Country-level coordination, planning, and monitoring

- Collaborated with the country's emergency operations centers, UN and multilateral partners, and foreign missions to coordinate health sector efforts to combat COVID-19.
- Attended weekly meetings of the Secretariat of Health's COVID-19 Situation Room.
- Formulated recommendations to adapt PAHO/WHO response protocols for COVID-19 and the rational use of medicines and other related compounds.
- Made progress in defining and implementing response plans at the state and community level for prevention, mitigation, and care for COVID-19 with a primary health care (PHC) approach. In this framework:
 - Supported the HEARTS initiative to protect people with risk factors from contracting severe forms of COVID-19.
 - Collaborated on the mhGAP program and suicide prevention at the national level as part of the COVID-19 mental health response.
 - Created a working group with national and international representatives to improve interventions to prevent, detect, and manage COVID-19 in migrants, asylum seekers, and forced returnees in border towns and land entry points.

- Supported the Senate Health Commission to organize two forums to share experiences among Latin American countries on the health systems' response to COVID-19.
- Guided patient care, reactivated non-pharmacological preventive measures, and managed the COVID-19 vaccination campaign in municipalities with high incidence and mortality.
- Facilitated the integration of local integrated health service delivery networks (IHSDNs) into the institutional structure of the state Secretariats of Health in Chiapas, Coahuila, and Guerrero.
- Broadened the scope of the tool for analyzing and designing risk perception strategies to support decision-making by high-level actors involved in the response and the preparation of strategic reports used to make decisions in the health sector.



Risk communication and community engagement

- Implemented strategies in the 32 states to manage public perceptions about the vaccine and vaccination through the National Laboratory on Risk Communication and designed communications to improve the public's adherence to preventive measures.

- Collaborated with the National Institute of Indigenous Peoples to develop and disseminate radio COVID-19 prevention messages in 68 indigenous languages, reaching an estimated 16 million people. This was complemented with additional support for ethnically inclusive communication campaigns to raise awareness and improve capture and coverage.
- Positioned the environmental aspects of health in the context of COVID-19 in collaboration with UNEP, the Secretariat of Environment and Natural Resources (SEMARNAT), and state governments.
- Created a working group with the government of Mexico City to promote a documentary video on the experience of being vaccinated against COVID-19 in the capital.
- Promoted a communication campaign called “Soy la Dosis” (“I am the dose”) to build confidence in the vaccine and vaccination among youth in Mexico’s 32 states.
- Created a space to collaborate with the General Directorate for Health Promotion to develop a documentary video on the experience of the special initiative on risk perception and communication to create better conditions for institutionalizing this initiative in emergency response and health promotion activities.
- Created the “Academia Dr. Lucero Rodríguez” initiative as a mechanism for dialogue, coordination, and ongoing training in risk communication between the national and state health promotion directorates in the 32 states.
- Stepped up efforts to build the capacity of the National Laboratory on Risk Perception and Communication and guide actions to expand the network of risk communication laboratories in various states.



Surveillance, rapid response teams, and case investigation

- Implemented and hosted the Go.Data platform for outbreak investigation and training; trained 99 professionals at the federal level (27 persons) and from 26 states (72 persons) in two advanced courses, including the new laboratory model (SARS-CoV-2 variants). Additionally, PAHO conducted accurate monitoring and timely detection of new outbreaks through the effective implementation by the Secretariat of Health of platforms, including Go.Data, and training for the National Institute of Public Health, as well as federal and state health workers.
- Supported revision of the Influenza Surveillance System (SISVEFLU) to incorporate COVID-19 into the Respiratory Diseases Surveillance System (SISVER).
- Contributed to updating guidelines for epidemiological and laboratory surveillance of viral respiratory diseases with new operational definitions for patient isolation and contact quarantine adapted for the Omicron VOC emergency.
- Hired an epidemiologist from the Epidemiology Directorate to improve the SISVER platform and respective data analysis. Consolidated the FluID platform; implemented the Go.Data platform; analyzed the information generated by the agrarian nuclei; identified deaths; and evaluated risk monitoring by the states.
- Helped refine the tool for measuring excess mortality from all causes during the pandemic (655,062 excess deaths in 2020–2021 as of epidemiological week 48 in 2021).
- Participated in the analysis of maternal mortality, and provided guidance on maternal death audits.
- Strengthened Health Intelligence and Emergency Units in four states (Chiapas, Coahuila, Guerrero, and Quintana Roo).



Points of entry, international travel, and transport

- Coordinated with the MoH, IOM, UNHCR, and ICRC to design infection prevention measures to detect possible cases among returnees arriving at points of entry and implement preventive non-pharmacological measures.
- Promoted and disseminated a video on the resumption of nonessential international travel, with emphasis on recovery of the tourism sector.
- Reaffirmed institutional positions with ICAO and the Ministry of Tourism and Ministry of Transportation and Communication concerning noninterference in international trade and traffic within the IHR framework and the promotion of preventive measures at points of entry.
- Reactivated recommendations to apply non-pharmacological preventive measures and the rational use of COVID-19 diagnostic tests at points of entry.
- Jointly developed communication materials with IOM on the prevention of COVID-19 and the right to health, to be used by points of care for migrant and mobile populations.



National laboratories

- Provided guidance to the national laboratory to update guidelines and build capacities.
- Provided tailored training and troubleshooting on COVID-19 molecular detection testing.
- Donated laboratory test kits, extraction kits, enzymes, internal controls, and other supplies.
- Donated rapid detection tests for SARS-CoV-2 antigens that are being used in the 32 states as part of a national evaluation for the implementation of Ag-RDTs nationwide.

- Hired laboratory professionals to strengthen serosurvey and genomic sequencing laboratories and case reporting in the Epidemiological Diagnosis and Reference Institute (InDRE).
- Consolidated the capacity for sequencing circulating SARS-CoV-2 strains to improve timely detection of variants of public health concern by hiring a specialized professional at the national laboratory and purchasing essential supplies.
- Contributed to the rational use of diagnostic testing based on the operational assessment of SARS-CoV-2 antigen rapid diagnostic tests (Ag-RDTs) performed in the country, as well as institutional guidelines.



Infection prevention and control and protection of the health workforce

- Provided training on the use of PPE.
- Provided guidance to the Secretariat of Health, based on PAHO/WHO recommendations for monitoring the health status of frontline health workers, the optimized and appropriate use of PPE, infection prevention and control procedures, and the use of diagnostic tests.



Case management, clinical operations, and therapeutics

- Helped draft a primary health care-based strategy for the first level of care to identify warning signs of suspected cases of COVID-19 and maintain control of at-risk persons.
- Provided support to review and develop guidelines to improve clinical management of COVID-19 patients, including the review and dissemination of evidence on the use of pharmacological regimens.
- Contributed to drafting and implementing a strategy for the rotation of clinical personnel (doctors and

specialized nurses) in a bid to strengthen clinical capacities, given the strain on health services.

- Helped include the HEARTS package as part of COVID-19 response at the primary care level to protect people with risk factors aggravated by COVID-19.
- Strengthened capacities for protecting mental health, including measures to prevent suicide.
- Provided guidance on preparing health care facilities to treat people infected with COVID-19.
- Provided training on the diagnosis and clinical management of COVID-19 to health personnel, shelter officials, and UN staff.
- Provided advice to strengthen the institutional capacities of the Federal Committee for Protection from Health Risks (COFEPRIS) and the regulation of medicines, vaccines, and medical devices, with a view to ensuring the provision of safe, effective, and quality medical supplies.
- Provided guidance on the possibility of procuring essential medical supplies offered by PAHO's Strategic and Revolving Funds, in the context of tackling COVID-19.



Operational support, logistics, and supply chain

- Provided technical recommendations on the selection of equipment and medical devices for COVID-19 care.
- Trained health authorities in estimating PPE needs.
- Supported the maintenance of IT equipment, encouraging proper implementation of technical cooperation.
- Provided the supplies needed to improve safety, prevent the spread of COVID-19, and ensure the continuity of the Country Office's operations.
- Supported the mobilization of experts and effective communication between them in missions to address the COVID-19 emergency.


• Supported import logistics to ensure delivery of donated supplies to the country.

• Supported the updating, consolidation, and implementation of the Operational Security, Contingency, and Continuity plans of the Country Office.



Maintaining essential health services during the pandemic

- Supported essential health services for persons with chronic diseases and coordinated the use of telemedicine with state authorities and other entities.
- Provided intersectoral support to address risk factors for NCDs in the context of COVID-19.
- Promoted measures to protect people in conditions of vulnerability, including a National Commission to Care for Vulnerable Populations in Emergency Conditions.
- Supported the drafting of a national guide for COVID-19 targeting pregnant women and newborns and provided recommendations to health professionals at the state level. Shared the Perinatal Information System (SIP COVID-19) form and provided training. This was part of PAHO's wider efforts to support the strengthening and reorganization of other priority services in the context of the pandemic, including healthy aging and maternal, perinatal, and sexual and reproductive health programs.
- Addressed health issues related to migrants, asylum seekers, and persons returning from abroad (in coordination with UN agencies and NGOs).
- Supported the reformulation of actions for the continuity of essential services related to infectious diseases during the pandemic.
- Provided support to ensure the activities of the Expanded Program on Immunization during the pandemic and ensure vaccination coverage.
- Included the expanded role of nursing as a key strategy for implementing the SABI Model (Salud para el Bienestar [Health for Well-being]) and



tackling COVID-19 and other priority health problems, especially cardiovascular disease and diabetes, as risk factors for severe forms of COVID-19. This was accomplished through the integration of HEARTS as a dynamic element for coordinating care for NCDs. PAHO additionally supported the establishment of the high-level Interinstitutional Roundtable for Transformation of the Health System, starting with the construction of integrated health service delivery networks (IHSDN), implementing the SABI Model, and including COVID-19 as a priority health problem to be addressed with a short-, medium-, and long-term vision.

- Strengthened mental health programs at the first level through training in the Mental Health Gap Action Program (mhGAP) and treatment for suicidal behavior, extending the program's implementation to the states.
- Supported and advised on current work to transform the Mexican health system, aimed at federalizing health care through the IMSS Bienestar program as the main provider of health services for the population without social security coverage, with a focus on the creation of IHSDNs/PHC to support the implementation of the strategy on community prevention, detection, mitigation, and care of COVID-19 and the maintenance of essential medical services.
- Implemented plans to help the states deploy the community strategy in Chiapas, Coahuila, and Guerrero and advance the implementation of the new care model and the development of IHSDNs/PHC.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization

programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.

- Participated in the development of guides and manuals on the use of the different vaccines authorized for use in Mexico, as well as the preparation of training materials for health sector institutions on the national COVID-19 Deployment and Vaccination Plan, and distributed guides and training materials and hired four consultants to support implementation of the activities.
- Participated in weekly meetings with the technical advisory group on vaccination in Mexico, where technical evidence was discussed and recommendations were made for the national COVID-19 vaccination plan.
- Supported the development of an app for mobile devices for recording COVID-19 vaccination and the vaccines administered through the universal vaccination program, as well as a vaccination module on the national health information platform and a module for recording adverse events associated with COVID-19 vaccines. Progress was made in the implementation of exercises on the use of apps in the field.
- Participated in weekly meetings of the National Committee of Experts on Adverse Events Following Immunization (AEFI) related to vaccination against SARS-CoV-2.



Nicaragua



Country-level coordination, planning, and monitoring

- Prepared a technical cooperation proposal to contain COVID-19 and mitigate its impact on health services and supported negotiations for two projects that have made it possible to procure critical materials and supplies for the country's COVID-19 response.
- Provided technical recommendations and supported the development of 31 normative documents (standards, guidelines, and protocols) on prevention and management of the COVID-19 response, incorporating regional and WHO international recommendations.
- Helped to update the emergency plans for Nicaragua's local-level health sector, using the STAR methodology¹ to evaluate risks to the sector, including COVID-19, in an effort to keep hospitals and health centers operating and able to meet the demand for health care during the ongoing pandemic. Emphasis has been placed not only on keeping hospitals safe, but ensuring that hospital services are available during the pandemic. The evaluation considered 19 local health systems (SILAIS). Based on the findings, local emergency plans are being updated to include a multihazard approach.
- As part of the regionwide Safe Hospitals initiative, provided support to the country to improve hospital

safety, including training human resources and applying tools such as INGRID-H for the inclusion of disaster risk management in hospitals.



Risk communication and community engagement

- Designed communication materials to prevent COVID-19.
- Supported the Healthy Markets project with the purchase of billboards, signs, and communication equipment.
- Supported the development of the risk communication strategy and the implementation plan for that strategy.



Surveillance, rapid response teams, and case investigation

- Worked with national authorities to comply with IHR standards in the delivery of COVID-19 surveillance data.
- Revised the following guides: Epidemiological Surveillance of Severe Acute Respiratory Infections and monitoring of COVID-19 transmission and trends.

¹ The STAR method is a structured manner of responding to a behavior-based interview question by discussing the specific situation, task, action, and result of the situation you are describing.

- Donated computer equipment to strengthen the situation and health statistics rooms.
- Provided technical cooperation to improve recording of COVID-19 mortality and excess mortality and on the use of the CovidSIM platform.
- Trained MoH epidemiologists in the implementation of COVID-19 surveillance standards and the establishment of situation rooms.



Points of entry, international travel, and transport

- Revised guidelines for the entry of transport carriers, companions, and personnel at formal land border points.



National laboratories

- Revised the laboratory biosafety guide related to COVID-19.
- Trained laboratory technicians in sampling methods and the implementation of biosecurity measures.
- Facilitated inputs and training for SARS-CoV-2 genomic sequencing.



Infection prevention and control and protection of the health workforce

- Donated PPE for the MoH Expanded Program on Immunization.
- Revised guidelines for the management of dead bodies in the context of COVID-19; transfer of patients by ambulance; prevention of COVID-19 transmission in commercial food establishments; safety of construction workers in health facilities; and IPC prevention in pharmacies, in the context of COVID-19.

- Trained personnel from 215 health centers in the use of personal protective equipment.



Case management, clinical operations, and therapeutics

- Donated computer equipment to hospitals.
- Donated basic medical supplies, PPE, and hospital equipment.



Operational support, logistics, and supply chain

- Delivered 9,250 N-95 masks to keep more people safe from COVID-19, in addition to donating PPE to the Benemerito Fire Department and the Nicaraguan Red Cross.




Maintaining essential health services during the pandemic

- Developed a course with the MoH to train 2,700 family and community health teams at the first level of care and a training plan for 20,000 health professionals, using the PAHO Virtual Campus for Public Health. To date, 500 professionals have been trained as tutors and facilitators for future cohorts.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and



requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.

- Supported implementation of the National Pharmacovigilance System.
- Provided input to the development of the national plan for the deployment of COVID-19 vaccines.
- Helped analyze the country's cold chain capacity.
- Collaborated in the development of a work plan to analyze and close gaps related to the effective deployment of vaccines.
- Supported the regular immunization program in the development and implementation of the nominal electronic registry for COVID-19 vaccination. This aims to reduce programmatic errors such as the duplication of administrative tasks, the late registration of doses, incorrect administration of the vaccine, and the use of expired vaccines. It will also enhance the country's ability to manage vaccine deployment in a timely and accurate manner and keep track of people's vaccination history, thus facilitating individualized follow-up.
- Supported the country in the receipt of donations from countries in the Americas and Europe.



Panama



Country-level coordination, planning, and monitoring

- Provided technical advice to an advisory committee made up of private sector and academic experts, formed when the pandemic began. The committee is the government team's support in the monitoring and evaluation of the epidemic, advancing evidence-based decision-making, and it has contributed to positioning health issues as a priority on the government's agenda.



Risk communication and community engagement

- Provided advice on creating innovative communication strategies that target the young population, aimed at maintaining measures to curb COVID-19 transmission, neutralize disinformation campaigns, and counter pro- and anti-vaccination polarization.
- Helped develop the "Strengthening the Capacities of the Union of Domestic and Similar Services Workers (SINGRETRADS)" project to provide its members with effective responses to the COVID-19 pandemic and its impact on quality of life. The project included developing capacities for the prevention of COVID-19 in work and community settings, addressing the pandemic's impact on mental health, developing a proposal to incorporate domestic workers into the

social security system, strengthening intersectoral partnerships, improving digital skills and internet connectivity, and producing and disseminating educational resources on the right to health, social security, and decent work, among other things.



Surveillance, rapid response teams, and case investigation

- Advised epidemiology personnel on updating COVID-19 surveillance guidelines, operational definitions, and data analysis.
- Contributed to the biweekly production of situation reports on the pandemic. These analytical documents have been fundamental for decision-making by local and national authorities.
- Supported strengthening of the Health Emergency Operations Centers (CODES) of the health regions at the national level with training activities and by donating telecommunication and audiovisual equipment, helping to optimize the pandemic response and foster health emergency and disaster preparedness and response.
- Provided PPE for the 276 Rapid Response Teams and 293 Unified Traceability Teams that are working constantly to trace cases and contacts, administer tests, and carry out promotion and prevention activities for containment at the community level.



Points of entry, international travel, and transport

- Provided technical information and advice on the surveillance of travelers and collaboration with other countries under the International Health Regulations (IHR 2005).



National laboratories

- Collaborated with the Memorial Gorgas Health Research Institute (ICGES) by donating PPE, laboratory equipment, antigen tests, and PCR kits for diagnostics, as well as reagents and supplies for the genomic surveillance of SARS-CoV-2. The installed capacity for diagnosis in the country as a whole, along with genomic surveillance by the Gorgas Institute, has facilitated comprehensive surveillance with a high volume of testing in the population, while at the same time providing collaboration with Central American countries that lack the capacity to perform sequencing, namely Belize, The Bahamas, El Salvador, Guatemala, Haiti, and Honduras.
- Supported the second seroprevalence study carried out in the second half of 2021 by moderating capacity-building sessions for genomic surveillance in the Region in collaboration with ICGES.
- Donated test kits and supplies, including PPE, to support ICGES and the network of laboratories in the public health system for the surveillance of respiratory viruses, including SARS-CoV-2.



Infection prevention and control and protection of the health workforce

- Supported capacity-building on COVID-19 through the Virtual Campus for Public Health (VCPH). In 2021, Panama had 6,737 persons registered with the VCPH.



Case management, clinical operations, and therapeutics

- Continuously updated health authorities on evidence regarding therapeutic options for COVID-19 and provided advice on measures for response to the persistent off-label use of medicines.



Operational support, logistics, and supply chain

- Donated and officially delivered two multipurpose modular buildings, each properly equipped with a situation room, a storage room for biologics, and a vaccination stand, one in Comarca Ngäbe Buglé and the other in the Santa Fe district of Darién province. These facilities will help strengthen epidemiological surveillance and immunization services in the two regions.
- Supported the procurement of PPE for frontline health teams.



Maintaining essential health services during the pandemic

- Provided technical assistance on emergencies and disasters and communicable and noncommunicable diseases.
- Supported drafting of the protocol for managing stress and burnout among health workers at the Ministry of Health and the Social Security Fund. Workers were trained for implementation in various health facilities.
- Supported the drafting of the COVID-19 and post-COVID-19 mental health care protocol, focused on addressing the mental health and emotional well-being of patients with the disease, as well as the proper management of sequelae.

- Created two online courses at the Panama Node of PAHO's Virtual Campus for Public Health: general introduction to the program for broadening coverage and management indicators for decision-making. The courses facilitated the continuing education of health personnel on many subjects, especially as it relates to strengthening primary care and maintaining essential services during the pandemic.
- Helped strengthen the Hospital Safety Index (HSI) in seven facilities of the Social Security Fund in several provinces in the country; Panama's emergency medical teams (EMTs) were strengthened in a process that included exchanges with EMTs from Costa Rica.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements,

providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.

- Supported the Expanded Program on Immunization to strengthen its cold chain through the donation of equipment such as cold boxes and thermoses to transport vaccines, as a way to bolster the network of regional deposits of biologics.
- Supported the country in its vaccination campaigns for COVID-19 and other vaccine-preventable diseases by financing the mobilization of mobile health teams in 10 of the country's health regions.



Paraguay



Country-level coordination, planning, and monitoring

- Collaborated with the Ministry of Public Health and Social Welfare (MoH) to develop and implement the national COVID-19 response plan, establish the national emergency operations center, and adapt PAHO protocols and methodologies to the country context.
- Collaborated with the emergency operations team to activate and guide emergency operations centers (EOCs) at the department level.
- Strengthened the MoH to improve access to health services for people with disabilities.
- Provided technical guidance to develop and adapt regulations and guidelines; improve national capacities for diagnosis with antigen tests for the detection of SARS-CoV-2 and genomic surveillance; review the tools used in planning for critical needs involving items such as medicines and oxygen; and make methodologies available for improving current and prospective epidemiological analyses.
- Supported the adoption of a risk stratification strategy in over 80 municipalities to increase the involvement of local governments. The stratification has proved sustainable for the Directorate-General for Health Surveillance and is updated weekly on risk maps.



Risk communication and community engagement

- Provided support to the Ministry of Information and Communication Technologies to disseminate risk communication materials in Spanish and Guaraní.
- Trained 50 health communicators and 40 journalists in COVID-19 risk communication.
- All MoH communication units in the 18 health regions were supported with laptops and smartphones for risk communication, with a focus on COVID-19 vaccination activities.



Surveillance, rapid response teams, and case investigation

- Collaborated with national authorities to establish COVID-19 surveillance systems in shelters for migrant workers returning from abroad.
- Provided guidance for setting up a call center for individuals who may have contracted COVID-19.
- Supported the analysis and screening of cases in the national situation room and health EOC.
- Produced 68 situation reports during the pandemic.

- Collaborated on risk estimates and predictive models, bringing in the highest level of the ministry to prepare for the emergence of new variants of concern. The MoH followed PAHO/WHO recommendations.



Points of entry, international travel, and transport

- Prepared communication materials for travelers and citizens returning to the country through land and air points of entry.
- Provided technical and financial assistance to set up two modular offices at the Salto del Guairá border crossing (with Brazil) to complement the first point of entry established at the Puerto Falcón crossing (with Argentina), with containers donated by PAHO to strengthen epidemiological surveillance and sanitary control at these border crossings.



National laboratories

- Provided training and guidance to the MoH to conduct PCR testing for COVID-19. Delivered supplies for PCR diagnostic tests and assessed capacity-building needs.
- Worked in collaboration with the Central Public Health Laboratory and other national agencies to build capacity to test for COVID-19 within the veterinary reference laboratory, following PAHO protocols and guidelines.
- Provided ongoing support to update the country's COVID-19 diagnostic strategy, using RT-PCR testing and other methods.
- Provided guidance and collaborated with the Central Public Health Laboratory of the MoH, laboratories in private hospitals, and other institutions such as SENACSA (National Service of Animal Quality

and Health) to increase diagnostic capacity at over 12 public laboratories with PCR testing capacity. This incentivized the establishment of 10 private laboratories that, with technical endorsement from the MoH, facilitated a more strengthened national response to the pandemic.

- Provided recommendations on the use of rapid diagnostic tests to respond to the country's needs and distributed 250,000 rapid tests purchased through PAHO's Strategic Fund.
- Installed the information system network for the diagnosis of COVID-19 in 16 national molecular biology laboratories in the country.
- Provided technical support to implement genomic surveillance and perform the first tests to detect variants of concern.



Infection prevention and control and protection of the health workforce

- Trained health workers to reduce infections among people with disabilities, with support from UNHCR and the Spanish Agency for International Development Cooperation.
- Distributed PPE and provided training to health workers on infection prevention and control; to Ministry of Justice personnel on long-term care facilities; and to the Ministry of Labor, Employment and Social Security on workspaces.
- Provided support to adapt hotels and similar spaces for isolation and patient care.
- Provided technical support for the implementation of protocols and guidelines to activate infection control committees in the hospital network.
- Visited the national hospital network to verify compliance with infection control protocols.



Case management, clinical operations, and therapeutics

- Contributed to the training of more than 8,000 health workers to reorganize and expand health services (case management, safe handling of cadavers, etc.).
- Provided PAHO and WHO clinical management guidelines for adult and pediatric cases, both mild and critical.
- Provided guidance to the network of more than 808 Family Health Units on maintaining essential primary health care services and managing mild cases of COVID-19.
- Helped reorient the flow of patients and health personnel in the network of services to improve safe case management.
- Assessed needs to expand Paraguay's health services to manage COVID-19 cases.
- Facilitated processes to integrate public sector services (MoH and the Social Security Institute) to respond effectively and efficiently to the increased demand for COVID-19 services.
- Delivered two oxygen generators for use by the Regional Hospital of Concepción and the District Hospital of Curuguaty to alleviate the need for medicinal oxygen in health facilities.
- Supported national authorities in adapting military facilities, hotels, and other establishments on the country's borders and using them as alternative sites for medical care.
- Supported the adoption of preventive measures in vulnerable groups, such as indigenous peoples, older persons, and those who are incarcerated.



Operational support, logistics, and supply chain

- Supported the planning, coordination, and logistics management of critical supplies, drugs, and equipment.
- Ensured that donors and partners within the UN system adhered to MoH COVID-19 donation procedures.



Maintaining essential health services during the pandemic

- Carried out communication campaigns on noncommunicable diseases, mental health, violence, and COVID-19, and provided technical cooperation to maintain all activities related to communicable diseases (HIV infection, tuberculosis, neglected infectious diseases, and antimicrobial resistance).
- Collaborated with the MoH to implement protocols and guidelines to maintain essential services (maternal, child, and adolescent health, vaccination, etc.).
- Helped strengthen mental health services in the context of COVID-19 and reform the current mental health system in the country.
- Offered support to ensure the continuity of essential services in the public health care network.
- Provided technical cooperation to implement the national plan for healthy food in response to COVID-19, including strengthening of the national capacity to provide universal access to nutrition services, with a focus on primary care.

- Supported the strengthening of nutrition clinics as part of primary care for both women and children under 5, and of the Comprehensive National Supplementary Food Program (PANI) by providing teams, tools, and inputs.
- Advocated and provided high-level technical cooperation to create a coordinated and collaborative workspace involving the MoH and the Ministry of Justice to guarantee priority care for prisoners suffering from neglected tropical diseases, and adopted measures to protect the health of people deprived of liberty and prison staff in the context of COVID-19.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements

with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.

- Supported the country's application to the COVAX Facility to gain access to COVID-19 vaccines.
- Provided technical cooperation to keep the COVID-19 vaccination plan on track. This included strengthening the information system, authorizing temporary vaccination stations, and implementing the system for surveillance of events supposedly attributable to vaccination or immunization (ESAVI) in the context of limited availability of biologics.
- Delivered 72 motorcycles to the EPI for vaccination activities to ensure that vaccines reach the most vulnerable populations in all corners of the country, even those with poor conditions of access.
- In support of the National COVID-19 Vaccination Campaign, fostered the expansion of coverage in indigenous communities by hiring vaccinators to go door-to-door with a view to increasing the nation's vaccination coverage.



Peru



Country-level coordination, planning, and monitoring

- Supported response, coordination, and communication mechanisms at the national and subnational health levels, as part of the government's integrated response to the emergency.
- Made recommendations on developing or adapting plans, strategies, and protocols on case management, telemedicine, epidemiological surveillance, IPC, biosecurity, procurement, and more.
- Supported the national Operations Command for COVID-19 in organizing health services and defining the roles and responsibilities of its multiple institutions and activities.
- Collaborated with the regional governments of Loreto, Ucayali, Ancash, Tumbes, and Piura on the reopening of primary health care services, rapid response teams, appropriate use of PPE, and services for refugees and migrants; designed a COVID-19 plan for health facilities on the borders with Brazil and Colombia to provide care for indigenous populations.
- Together with the private sector, implemented a plan with the regional government of Ancash and WFP to contain COVID-19 transmission at the primary level of care.
- Organized events to share primary health care experiences in the context of COVID-19 along with

the primary health care community and support from the Ministry of Health, the Social Security for Health program (ESSALUD), the Waynakay organization, and the Peruvian Family and Community Medicine Partnership. These events featured the sharing of experiences, from which best practices were selected and are being disseminated.



Risk communication and community engagement

- Collaborated on implementation of the MoH and Council of Ministers' risk communication plans in 13 regions in Peru. Trained 300 journalists and 50 communicators; strengthened 10 risk communication plans.
- Designed, adapted, and distributed information materials for pregnant women, the elderly, and caregivers on the use of PPE, hand hygiene, environmental health, COVID-19 prevention for the incarcerated, vaccination, risks of self-medication, and care for patients with mild symptoms. An eight-episode radio show was produced, translated, adapted to Quechua speakers, and broadcast on six commercial and community radio channels.
- Coordinated the health sector position on COVID-19 through 94 prime-time media interviews, each of which reached an estimated 500,000 homes.

- Supported the development of a COVID-19 containment community engagement plan with an intercultural approach for three regions: Ancash, Ucayali, and Amazonas; supported its implementation in Ucayali; and strengthened community COVID-19 committees in Amazonas and Ancash in contact referral, diagnostics, and treatment.



Surveillance, rapid response teams, and case investigation

- Strengthened the surveillance system by supporting the updating of regulations and adapting national tools and protocols. Offered guidance on virological surveillance for the detection of SARS-CoV-2 variants of concern and alerts, under the IHR.
- Strengthened capacities in epidemiology, laboratories, case detection, monitoring, and outbreak control at the national level and in migrant host cities such as Tumbes, Lima, and La Libertad.
- Collaborated on the design of the COVID-19 seroepidemiological survey in Lima and Callao to determine the prevalence by age group.
- Reviewed the strategy for syndromic surveillance of acute respiratory infections and the surveillance of other events indirectly related to COVID-19, including mental health-related events.
- Strengthened health situation rooms in Loreto and Ancash with the introduction of diagnostic technologies for epidemiological surveillance and contact tracing, the installation control boards, and telehealth.
- Developed a course on prevention and control of epidemic outbreaks for the PAHO-Peru virtual classroom.



Points of entry, international travel, and transport

- Collaborated with the CDC-Peru and the National Liaison Center to formulate guidelines and procedures; supported surveillance at points of entry with Brazil and Colombia.
- Supported the preparation of a national travel declaration for the gradual lifting of quarantine measures, the regulation of air and sea traffic, and controls at airports.



National laboratories

- Designed a plan to assess testing needs, based on hypothetical scenarios and data modeling; strengthened quality control.
- Strengthened the capacity of the National Institute of Health laboratory and the laboratory network in 12 regions to process molecular analysis samples. Provided supplies: 1,185,207 molecular reagents, RNA extraction cases, and reverse transcription; international procurement of 122,000 antigen tests through the Strategic Fund; purchase of 5,000 Standard-F antigen tests; purchase of 9,957 Standard-Q antigen tests and two analyzers; one 6B6C-1/HRD conjugate vial; two FIRST sets/ZIRV probes; 50 enzyme pairs for molecular tests; 40 diphtheria antitoxin 100 doses; and four positive SARS-CoV-2 controls.
- Collaborated on a biosecurity protocol for taking and transporting biological samples, including a flowchart for the rational use of laboratory materials and a best practices manual for their storage.



Infection prevention and control and protection of the health workforce

- Helped reactivate the committee on intrahospital infections; made recommendations on infection prevention and control and health workforce protection measures (IPC) for the case management protocol.
- Updated clinical guidelines for patients with COVID-19; regulations for isolation centers and biosecurity and the handling of contaminated materials; and technical specifications and recommendations on the use and disposal of PPE.
- Collaborated with the MoH and the National School of Public Health to produce a virtual course on IPC. Trained health workers and 4,200 medical students on the clinical diagnosis of COVID-19, the use and disposal of PPE, and biosecurity measures.
- Donated substantial quantities of PPE to the Ministry of Health (gowns, biodegradable bags, jackets, C-N95 respirators, shoe covers, gloves, glasses, three-ply surgical masks, N95 respirators, and face shields). These were distributed to national health agencies, the Peruvian Army, and the national prison institute, as well as hospitals in five regions of the country.
- Collaborated in the preparation of a pharmacovigilance plan and monitored the use and safety of medicines and medical devices. Adapted regulatory measures to facilitate the availability and donation of technology, as well as authorizations for registering health products.
- Implemented the WHO evaluation tool to evaluate IPC in five hospitals in Callao, East Lima, La Libertad, Lambayeque, and Piura.
- Developed a protocol for the management of solid household and hospital waste, in the context of COVID-19.

- Implemented infection prevention and control programs, and provided personal protective equipment to address health priorities, including COVID-19.



Case management, clinical operations, and therapeutics

- Supported the reorganization of health services in five hospitals to improve the care of COVID-19 patients. Provided PAHO/WHO guidelines, flowcharts, and the recommended set of basic services in the context of COVID-19.
- Signed an agreement with the MoH to apply the Unified Emergency and Disaster System (SISMED) to the management of pre-hospital care for COVID-19 patients. Supported case management; calculated gaps; reorganized human resources for ICU care; and developed plans for the continuity of care and outpatient services.
- Supported amending the national standards set forth in the Rural and Urban Health Service Act (SERUMS) to allow professionals who studied abroad to participate in the efforts to fight COVID-19.
- Strengthened primary health care; donated biomedical equipment to health facilities; collaborated on a review of protocols for the prevention, diagnosis, and treatment of COVID-19 in pregnant women and newborns; and organized a local network to support elderly individuals and people with disabilities.
- Collaborated on a mental health plan in the context of COVID-19 that includes assessing the impact of quarantine on the population's mental health.
- Provided computers and printers to facilitate telemedicine and teleconsultation processes and help with patient care (appointment management).



Operational support, logistics, and supply chain

- Helped monitor the supply chain for pharmaceuticals, medical devices, and other supplies. Coordinated with the WHO global platform, in line with the national demand for supplies. Estimated needs for essential COVID-19 and non-COVID-19 goods and monitored their availability and use.
- Contributed to storage strategies and the search for domestic and international suppliers of products with limited availability, including orphan drugs, using PAHO strategies (leprosy, Chagas disease, and others).
- Supported the National Center for Strategic Health Resources Supply (CENARES) in the purchase of medicines, medical devices, and diagnostic supplies through PAHO's Strategic Fund.



Maintaining essential health services during the pandemic

- Prepared a guide for COVID-19 home visits to support the recovery of essential services in the Ancash, Ucayali, and Amazonas regions.
- Supported the rapid assessment of noncommunicable disease (NCD) services. Trained primary health care workers to manage and monitor patients with cardiovascular diseases and diabetes using telemedicine.
- Monitored and supported the activation of response at the primary care level for priority communicable diseases in Loreto, and services for pregnant women and newborns.
- Evaluated services in Ancash, Ucayali, and Amazonas, and made recommendations to improve the maternal-neonatal services network.
- Analyzed care provided to older persons; developed an online course and provided medical history forms and mental health exercises.

- Monitored water, sanitation, and hygiene risk factors in first-level health facilities in Ancash and delivered chlorine-producing equipment and portable laundry facilities; supported health inspections of water, sanitation and solid waste providers and closed community spaces in Ancash.
- Supported indigenous populations in Peru's Amazon region through the Condorcanqui and Coronel Portillo health networks in the Amazonas and Ucayali regions in a joint effort with the Regional Health Directorates (DIRESA). Supported response capacity at the first level of care by procuring equipment for two blood banks (ELISA reader, freezer, preservative, centrifuge, and microcentrifuge, among other items).
- Collaborated in voluntary donation campaigns and capacity-building for human resources, providing basic equipment for primary care and the intercultural adaptation of services, and using standardized tools to assess essential conditions and intercultural appropriateness in health facilities.
- Implemented standardized tools to evaluate essential conditions and intercultural appropriateness in five hospitals in the Amazonas region and eight health centers/posts in Ucayali.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.

- Kept the MoH and other stakeholders abreast of progress in vaccine development and mechanisms for access to vaccines.
- Supported adapting the National Vaccination Plan to the context of COVID-19; proposed content based on PAHO guidelines to plan for the introduction of the COVID-19 vaccine.
- Supported national multisectoral efforts and coordination within the MoH and other agencies regarding the introduction of the vaccine.
- Conducted social communication activities in the regions of Ucayali, Madre de Dios (triple border), Amazonas, Loreto (triple border), and Cusco to integrate and systematize available information on the population's views on COVID-19 vaccination by identifying the actors engaged in social communication and consulting available information sources and channels; facilitated the coordination of actors for the dissemination of consistent messages; and monitored and evaluated the impact of communication on adherence to and acceptance of vaccination.
- Disseminated promotional spots in indigenous languages in the Loreto region on the importance of vaccination against COVID-19.
- Disseminated the “We’re coming to your community” campaign to promote vaccination in native communities of Madre de Dios.
- Produced and disseminated radio microprograms and video testimonials to help change attitudes and behaviors in indigenous communities in the Cusco region in the context of the COVID-19 vaccination process.
- Donated five ultra-low temperature freezers.
- Donated stethoscopes, blood pressure monitors, thermometers, oximeters, and oxygen manometers for the Loreto and Ucayali regions.
- Donated data loggers, digital thermometers, and vaccine transport boxes to the MoH to strengthen the cold chain.
- Donated personal protective equipment, alcohol-based gel, and computer equipment to strengthen the immunization process in the Loreto, Cusco, Ucayali, and Amazonas regions.
- Donated outboard motors to support mobilization by river in the Loreto region to strengthen the immunization process in remote communities.



Saint Kitts and Nevis



Country-level coordination, planning, and monitoring

- Conducted a webinar on health emergencies and disaster risk management in the context of COVID-19.
- Held consultations with national health authorities on the development of country strategic preparedness and response plans, following WHO guidelines.
- Continued publication of the Country Office COVID-19 information bulletin, including measures taken by countries to contain the spread of the virus and highlights of PAHO's support to Member States.
- Coordinated with the United Nations Resident Coordinator (UNRC) system on the implementation of COVID-19 initiatives to ensure a multisectoral approach to tackling the pandemic.



Risk communication and community engagement

- Conducted risk communication training and reviewed messaging for COVID-19. Produced 500 posters on different aspects of COVID-19, including IPC and handwashing, and 800 parenting booklets.
- Provided support to develop the country's Risk Communication Plan.

- Convened a virtual PAHO COVID-19 presentation and update for journalists and media professionals from Saint Kitts and Nevis.
- Provided psychological first aid training to COVID-19 hotline volunteers and community leaders to support individual and community resilience.
- Conducted a visit to the country's prison population and prison staff and held educational sessions.
- Carried out a three-month gender and violence awareness campaign in the context of COVID-19.
- Developed and disseminated social media cards on the prevention of noncommunicable diseases, mental health risk factors, healthy eating, how to provide mental health and psychosocial support, and how to prevent stigma during the COVID-19 pandemic.
- Produced a video highlighting the contributions and issues faced by HCWs in the COVID-19 response; provided technical assistance to produce a short video targeting caregivers, children, adolescents, and the general population to promote confidence in the EPI program.
- Produced a teenage pregnancy awareness video within the framework of the Teenage Pregnancy Week and Youth International Day. These activities strengthened intersectoral collaboration between the MoH and the Ministry of Youth.
- Conducted the webinar "Variants of Concern Delta

and Omicron: Transmissibility, Severity, and Impact on Social Mobility: What Will Drive Future Trends and Optimize our Response.”

- Developed and disseminated communications materials to address gaps in knowledge and concerns about the COVID-19 vaccines. A discussion series, “A matter of fact,” was developed to inform and educate, helping to dispel concerns linked with vaccine hesitancy.
- Conducted a four-part webinar series on stress management for frontline workers and parents. Worked to build capacity in psychological first aid for first responders and community leaders and launched a mass media campaign on mental health and psychosocial support (MHPSS).
- Conducted webinars on COVID-19 vaccination and international travel and on monitoring COVID-19 vaccine deployment toward herd immunity.



Surveillance, rapid response teams, and case investigation

- Procured a vehicle to support contact tracing activities in Nevis and hired two workers to conduct contact tracing and surveillance.
- Delivered a webinar to share methods for mathematical modeling of COVID-19.
- Provided orientation for national epidemiologists and laboratory personnel on the PAHO regional program for influenza laboratory-based surveillance for SARI/ILI and its link to COVID-19.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.
- Strengthened capacity for surveillance, contact tracing, and data entry by hiring surveillance officers, IT technicians, and data entry clerks and providing IT

equipment, including laptops and tablets. Collected weekly data on COVID-19 trends and contact tracing.



Points of entry, international travel, and transport

- Provided banners to raise awareness about COVID-19 at points of entry.
- Reviewed entry protocols for the reopening of borders as necessary, and provided feedback to national health authorities, as appropriate.
- Provided necessary equipment (e.g., thermal imagers and IT tools for data collection) to strengthen case detection at points of entry.
- Hosted a webinar on considerations for resuming nonessential travel in the Caribbean.
- Strengthened capacity at points of entry by hiring port health officers.



National laboratories

- Procured laboratory supplies for COVID-19 testing.
- Conducted a webinar on scaling up laboratory testing in the Caribbean.
- Facilitated training on molecular testing to establish on-island testing capacity.
- Strengthened laboratory diagnostic capacity for molecular testing through the procurement of GeneXpert cartridges. Provided in-country training for staff and assessed the PCR testing capacity of the laboratory at the JNF hospital.
- Disseminated updates on COVID-19 diagnostics, including recommendations for the use of rapid antigen tests.



Infection prevention and control and protection of the health workforce

- Trained staff (hospital and clinics) in the donning and doffing of PPE.
- Assessed the country's IPC system.
- Procured and disseminated PPE kits to reduce the risk of infection for health workers.
- Convened a webinar on protecting health care workers from COVID-19.
- Provided training in IPC for 100 frontline workers at points of entry and 180 workers in the hospitality industry.
- Trained staff to manage increased admissions to hospitals and ICUs and to consider infection prevention and control measures for health care workers.



Case management, clinical operations, and therapeutics

- Convened a seminar on managing the flow of health care workers exposed to COVID-19 in health facilities. Produced and distributed a mobile booklet for health care workers.
- Convened a seminar on the WHO Mental Health Gap Action Program's Humanitarian Intervention Guide (mhGap-HIG), focusing on general care and acute stress among health care workers.
- Improved local health system capacity and protected health care workers to safely diagnose COVID-19 and deliver health care services.
- Procured three patient monitors for surveillance and case management of persons with COVID-19.
- Provided training on clinical management of COVID-19 and procured four ventilators, five vital signs monitors, and five oxygen concentrators to boost management capacity.



Operational support, logistics, and supply chain

- Shared the COVID-19 Supply Management Tool to facilitate logistics for managing the supplies, equipment, and medicines received for the national response.



Maintaining essential health services during the pandemic

- Worked with health authorities to highlight COVID-19 experiences and best practices, e.g., integrating environmental public health into the COVID-19 emergency; continuation of immunization programs and maternal and perinatal response during the pandemic; and paying attention to dengue.
- Delivered a webinar on the response to dengue during the pandemic. The webinar targeted policymakers, health experts, and medical and public health practitioners.
- Shared the Epidemic Needs Analysis Tool and provided virtual training to health workers.
- Worked with the Ministry of Health to support Family Health Day, whose theme was Families in the time of COVID-19.
- Supported the creation of a national MHPSS Coordinating Committee and developed standard operating procedures for MHPSS during emergencies.
- Designed and printed WHO cardiovascular risk charts and body mass index charts to support the risk stratification process for health centers to identify and manage high-risk patients.
- Trained health personnel to implement the online Self-Management for Chronic Disease Program. Provided manuals and tablets to support implementation of the program.

- Conducted a webinar (73 participants) on scaling up protection, promotion, and support for breastfeeding to address concerns about whether mothers with COVID-19 can transmit the SARS-CoV-2 virus to their babies.
- Conducted needs assessment to support the development of mHypertension, a WHO initiative to disseminate messages for persons with chronic diseases, during the COVID-19 pandemic.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.

- Conducted training sessions on ESAVI and cold chain management.
- Provided technical support for development of the COVID-19 National Deployment and Vaccination Plan and to support vaccine introduction readiness using the VIRAT.
- Shared technical guidance and support for completion of the COVAX Facility requirements.
- Provided ongoing technical support to vaccine management through the delivery of trainings, webinars, and individual country sessions.
- Improved the capacity to store and manage vaccines and address cold chain needs, including the procurement of cold chain equipment.
- Supported improving data quality through the digitalization of COVID-19 vaccine data by hiring data entry clerks and procuring IT equipment.
- Procured a vehicle to support the rollout of the COVID-19 vaccination program.



Saint Lucia



Country-level coordination, planning, and monitoring

- Supported national authorities in developing the COVID-19 preparedness and response plan.
- Launched consultations with national health authorities on the development of country strategic preparedness and response plans following WHO guidelines.
- Continued publication of PAHO's COVID-19 information bulletin, including measures taken by countries to contain the spread of the virus and highlights of PAHO support to Member States.
- Coordinated with the United Nations Resident Coordinator (UNRC) system on COVID-19 initiatives.



Risk communication and community engagement

- Supported the development of communication and community awareness materials for the public and vulnerable groups, including to better control chronic diseases and reduce the risk of increased severity of symptoms.
- Produced and distributed posters and booklets on COVID-19 preventive public health measures.

- Provided retractable information banners for placement at points of entry and disseminated risk communication information to the public and travelers.
- Created public service announcements (PSAs) on alcohol use and abuse and its implications for COVID-19; disseminated a PSA (HEARTS jingle) on promoting a healthy lifestyle for persons with chronic diseases; and launched an anti-stigma communication campaign.
- Provided capacity-building for health care workers on mental health and psychosocial support.
- Procured equipment to allow the Health Promotion Unit to produce and disseminate communication materials.
- Produced a video highlighting contributions and issues faced by HCWs in the COVID-19 response.
- Conducted the webinar "Variants of Concern Delta and Omicron: Transmissibility, Severity, and Impact on Social Mobility: What Will Drive Future Trends and Optimize our Response."
- Developed and disseminated communication materials to address gaps in knowledge and concerns about COVID-19 vaccines. A discussion series, "A matter of fact," was developed to inform and educate, helping to dispel concerns linked with vaccine hesitancy.

- Conducted a four-part webinar series on stress management for frontline workers and parents.



Surveillance, rapid response teams, and case investigation

- Disseminated technical guidance on COVID-19 surveillance and SARI/ILI surveillance flowcharts to all health care facilities.
- Introduced COVID-19 data collection tools (e.g., Excel line listing, revised reporting form), as well as a database to track vulnerable and high-risk population groups.
- Provided orientation on Go.Data, the WHO contact tracing software for data capturing and monitoring of the chain of transmission.
- Provided orientation on EpiEstim and CovidSIM, mathematical models for the generation of effective reproductive rate and short-term forecasting of COVID-19 cases.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.



Points of entry, international travel, and transport

- Conducted COVID-19 health surveillance training at ports.
- Reviewed entry protocols for the reopening of borders and provided feedback to national health authorities as appropriate.
- Procured necessary equipment and IT tools for data collection at the main airports to strengthen infrastructure for case detection at points of entry.
- Convened a webinar on considerations for resuming nonessential travel in the Caribbean.



National laboratories

- Distributed sample collection and RT-PCR testing materials for COVID-19 testing.
- Conducted training and hands-on practice in theoretical aspects of molecular diagnostics.
- Ensured laboratory capacity to detect COVID-19 cases with necessary tests and reagents and scale up capacity as more cases were detected.
- Convened a webinar on scaling up laboratory testing in the Caribbean.
- Led training on molecular testing to establish on-island testing capacity.
- Disseminated updates on COVID-19 diagnostics, including recommendations for use of rapid antigen-based tests (Ag-RDTs) for COVID-19.
- Procured GeneXpert cartridges, laboratory test kits, and consumables in support of laboratory strengthening for diagnosis of SARS-CoV-2.



Infection prevention and control and protection of the health workforce

- Conducted training on IPC for health care workers.
- Delivered PPE to reduce the risk of COVID-19 infection among health care workers and provided training on its use.
- Procured infrared and digital contact thermometers, vital signs monitors, and oxygen concentrators for surveillance and case management of persons with COVID-19.
- Updated guidelines on maternal and child health and the management of pregnant women and neonates during the pandemic.



Case management, clinical operations, and therapeutics

- Improved local health system capacity and provided recommendations for health care workers to safely deliver health care services.
- Procured infrared and digital contact thermometers, vital signs monitors, and oxygen concentrators for surveillance and case management of persons with COVID-19.
- Updated guidelines on maternal and child health and the management of pregnant women and neonates during the pandemic.
- Developed protocols for the management of COVID-19 cases through stakeholder engagement and tabletop simulation exercises.



Operational support, logistics, and supply chain

- Facilitated the international procurement of laboratory supplies, PPE, and essential cleaning and sanitation supplies for shipment to Saint Lucia.



Maintaining essential health services during the pandemic

- Procured and distributed water testing kits to the MoH.
- Worked with the country's immunization program to ensure the continuation of vaccination during the pandemic and create a forum to share experiences and challenges in adjusting the delivery of immunization services. Provided training on how to use the Joint Reporting Form (JRF) and the new monthly reporting system for vaccines. PAHO also conducted a virtual campaign to support Vaccination Week in the Americas.

- Convened a webinar on dengue response during the COVID-19 pandemic, targeting policymakers, health experts, and medical and public health practitioners.

- Provided training on COVID-19 and its impact on children living with disabilities.

- Developed a UNICEF and PAHO interagency work plan to ensure that children can safely return to school ("Safe Back to School").

- Conducted a webinar for youth and adolescents to raise awareness about COVID-19 and familiarize them with their roles in the country's pandemic response.

- Provided self-management strategies for patients with chronic disease to reduce the risk of increased symptom severity.

- Provided support to establish a multisectoral mental health and psychosocial support (MHPSS) coordination mechanism.


- Conducted situation analysis to determine the extent of illicit drug use, the characteristics of users, types of drugs used, and treatment needs during the COVID-19 pandemic.

- Developed a school nutrition policy to address unhealthy eating and inactivity in children during the COVID-19 pandemic.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to



the Region and supporting coordination and country readiness.

- Provided technical support for the development and subsequent implementation of the COVID-19 National Deployment and Vaccination Plan and to support vaccine introduction readiness using the VIRAT.
- Provided training to health workers on the use of syringes, events supposedly attributable to vaccination or immunization (ESAVI), cold chain management, and completion of the WHO/UNICEF electronic Joint Reporting Form for the collection of immunization data, including data on COVID-19 vaccination.
- Continued supporting the Expanded Program on Immunization.
- Provided support to assess cold chain capacity and address any identified gaps in key supplies for effective vaccine distribution and additionally, provided vaccine carriers and cold chain equipment.
- Provided technical support to strengthen information systems and digital platforms to monitor immunization coverage, including vaccine safety.
- Launched a regional campaign to support vaccine uptake.
- Conducted webinars on COVID-19 vaccination and international travel and on monitoring COVID-19 vaccine deployment toward herd immunity.
- Improved the capacity to store and manage vaccines and address cold chain needs, including the procurement of cold chain equipment.
- Supported improving data quality through the digitalization of COVID-19 vaccine data by hiring data entry clerks and procuring IT equipment.
- Strengthened capacity for the safe delivery of vaccines by procuring items that would make it possible to create additional space at health clinics.
- Provided technical assistance to design and develop a behavioral change campaign strategy and designed a monitoring system and evaluation framework to measure the impact of the campaign.
- Helped boost capacities of the Expanded Program on Immunization (EPI) team and other key stakeholders.



Saint Vincent and the Grenadines



Country-level coordination, planning, and monitoring

- Provided recommendations to national health authorities on the COVID-19 response.
- Launched consultations with national health authorities on the development of strategic preparedness and response plans, following WHO guidelines. Pre-populated templates were provided as working documents on which to base discussions with national health authorities.
- Continued publication of PAHO's COVID-19 information bulletin, including measures taken to contain the spread of the virus and highlights of PAHO support to the Member States.
- Coordinated with the United Nations Resident Coordinator (UNRC) system on COVID-19 initiatives.
- Procured A/C units for the health EOC and PCR laboratory.



Risk communication and community engagement

- Distributed 580 posters on COVID-19. Produced information, education, and communication (IEC) materials in the form of 250 posters for preprimary and primary school children.

- Provided support for the safe reopening of schools, together with UNICEF.
- Convened a virtual dialogue in which more than 1,400 young people explored ways to adjust to this new way of living and how to cope with pandemic-related isolation.
- Provided health authorities with a printer and scanner to support the preparation and dissemination of communication materials related to substance abuse and COVID-19. Communication equipment was also provided to support the continuity of nutrition services and activities and to scale up communication efforts with vulnerable populations.
- Produced a video to highlight the contributions and issues faced by health care workers in the COVID-19 response and another to celebrate Nurses Week.
- Produced two public service announcements (PSAs) to inform the general public about quarantine requirements for visitors and locals in addition to PSAs on hygiene and sanitation, mental health, and healthy eating during emergencies. Worked closely to review the scripts and facilitate the production and airing of these PSAs.
- Conducted the webinar "Variants of Concern Delta and Omicron: Transmissibility, Severity, and Impact on Social Mobility: What Will Drive Future Trends and Optimize our Response."
- Developed and disseminated communication materials to address gaps in knowledge and

concerns about COVID-19 vaccines. A discussion series, “A matter of fact,” was developed to inform and educate, helping to dispel concerns linked with vaccine hesitancy.

- Conducted a four-part webinar series on stress management for frontline workers and parents. Worked to build capacity in psychological first aid for first responders and community leaders and launched a mass media campaign on mental health and psychosocial support (MHPSS).
- Produced and disseminated social media cards and posters on building individual resilience and developed jingles promoting community resilience and healthy eating.



Surveillance, rapid response teams, and case investigation

- Procured equipment for COVID-19 surveillance activities, including four desktop computers.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.
- Strengthened surveillance capacities by providing additional IT equipment for data entry and a vehicle to assist in transporting contact tracing teams.



Points of entry, international travel, and transport

- Supported the production of information banners for points of entry.
- Reviewed, on a regular basis, protocols for the reopening of borders and provided feedback to national health authorities, as appropriate.

- Provided necessary equipment (e.g., IT tools for data collection), to strengthen case detection at points of entry.
- Conducted a webinar on considerations for resuming nonessential travel in the Caribbean.



National laboratories

- Procured materials, including enzymes, internal control primers, PCR tubes, and extraction kits; coordinated with the IAEA to donate supplies and equipment.
- Trained laboratory staff from the National Health Laboratory to test for COVID-19 using open platforms for molecular diagnostics. Delivered test kits and critical material to implement the reference protocol. This marks the first time that Saint Vincent and the Grenadines’ national laboratory has installed capacity for PCR laboratory testing.
- Strengthened the diagnostic/surveillance capacity of the molecular lab by providing a computer, printer, and related peripherals; installed two split air conditioning systems to support cold chain management of COVID-19 diagnostics.
- Conducted a webinar on scaling up laboratory testing in the Caribbean.
- Led training on molecular testing to establish on-island testing capacity, including training on the use of open platform molecular techniques for diagnosis and surveillance. PAHO strengthened laboratory diagnostic capacity for molecular testing through the procurement of 120 GeneXpert cartridges and a PCR machine to conduct molecular detection of COVID-19.
- Procured RT-PCR test kits, laboratory reagents, and rapid antigen tests for SARS-CoV-2 diagnosis.



Infection prevention and control and protection of the health workforce

- Conducted training on essential aspects of IPC.
- Supported the reorganization of health services to reduce human-to-human transmission in health facilities.
- Provided handwashing stations, hand sanitizers, and sanitizing stations for eight schools to slow the spread of COVID-19.
- Launched a virtual IPC training course to reach Caribbean health care workers (HCWs) and personnel involved in other high-risk professions to disseminate best practices and recommendations to reduce the risk of infection with the virus.
- Provided PPE, including masks, gowns, gloves, etc., to protect HCW.



Case management, clinical operations, and therapeutics

- Trained responders in the psychosocial aspects of COVID-19, including those at points of entry and those working in basic needs services and inpatient and long-term care facilities.
- Supported the development of a national plan to address mental health needs.
- Improved local health system capacity and protected health care workers to safely diagnose COVID-19; provided recommendations for health care services.
- Procured three patient monitors, 10 infrared thermometers, 100 digital contact thermometers, six vital signs monitors, five oxygen concentrators, two defibrillators, electrocardiogram (ECG) machines, oxygen flowmeters, oxygen regulators, and other accessories to maintain the oxygen supply for the treatment of hospitalized COVID-19 patients.



Maintaining essential health services during the pandemic

- Procured two water quality testing kits for environmental health.
- Conducted virtual training on the Self-Management for Chronic Disease Program. Provided manuals and tablets to support implementation of the program.
- Designed and printed WHO cardiovascular risk and body mass index charts to support the identification and management of high-risk patients.
- Supported strengthening of the vector control program to respond to the dengue outbreak by providing one vehicle-mounted ultra-low volume (ULV) machine, six handheld fogging machines, and insecticides. Produced a video on dengue prevention and control; printed and disseminated dengue clinical management guidelines; and procured two dialysis machines for the management of severe dengue cases.
- Procured infrared thermometers and face shields to support COVID-19 management in schools.
- Developed youth engagement activities to discuss concerns related to the pandemic. Helped develop several activities to engage young people and address their concerns. Developed a virtual youth camp and provided tablets to youth leaders to facilitate weekly virtual training sessions and discussions. Provided IT equipment for adolescent health.
- Held training sessions for pharmacists, nurses, and physicians ahead of the arrival of NCD kits designed to supply medicines for patients with chronic diseases in emergency settings.
- Convened discussions with country focal points that resulted in agreement on interventions to use as a framework to address gender-based violence during the COVID-19 pandemic.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Conducted training sessions on ESAVI and cold chain management.
- Provided technical support for development of the COVID-19 National Deployment and Vaccination Plan and to support vaccine introduction readiness using the VIRAT.
- Conducted webinars on COVID-19 vaccination and international travel and on monitoring COVID-19 vaccine deployment towards herd immunity.
- Increased capacity for vaccine storage and the management of cold chain needs and provided cold chain equipment.
- Supported improving data quality through the digitalization of COVID-19 vaccine data by hiring data entry clerks and procuring IT equipment.
- Strengthened the capacity to roll out the COVID-19 vaccination program by hiring an EPI consultant.
- Conducted a vaccine hesitancy survey and implemented a communication campaign.



Suriname



Country-level coordination, planning, and monitoring

- Participated in weekly Incident Management System team meetings to coordinate PAHO's response to the COVID-19 pandemic; prepared and shared weekly situation reports with counterparts, including the MoH, UNCT, and the diplomatic corps.
- Contributed to ongoing discussions with the MoH and the COVID-19 Outbreak Management Team on strategies to control the spread of the disease and shared technical guidance documents.



Risk communication and community engagement

- Developed, produced, and disseminated print material and media messages for radio, television, and social media on prevention measures for COVID-19 and vaccination promotion. Special sessions were held in youth detention centers in Paramaribo, indigenous and tribal villages, and goldmining camps in the interior.
- Produced 35 pieces of electronic risk communication and awareness materials in Dutch and 10 other local languages. These materials promote prevention measures and vaccination, with special targeting to health care workers, pregnant women, indigenous and tribal people, and adolescents.

- Developed and printed a manual on community engagement for risk communication and trained village and community leaders in its use.
- Supported and participated in media sessions (radio, television, and social media) on COVID-19 risk prevention measures; psychosocial support and mental health well-being in response to COVID-19; NCDs; smoking and COVID-19; and addressing benefits and concerns related to the COVID-19 vaccine.
- Supported a virtual workshop for religious leaders to improve knowledge and build capacity in advocating and promoting COVID-19 prevention measures and vaccination.
- Supported the development and implementation of virtual training sessions in mental health and psychosocial support for health care workers, educators, police, and community and religious leaders to help people manage stressful situations related to the pandemic.
- Supported the development and implementation of radio and television programs on mental health self-awareness and coping skills in the four main local languages.
- Provided audio equipment (speakers), laptops, and a camera to support communication and public awareness.



Surveillance, rapid response teams, and case investigation

- Supported the national epidemiology unit with analysis of COVID-19 data, training, and procurement of a data program to enhance visualization and analysis. Supported the analysis and preparation of graphs and charts to describe the epidemiology of the pandemic in Suriname to help inform the response.
- Trained malaria service delivery workers to identify signs and symptoms of COVID-19 and supported joint surveillance missions for case detection and investigation of malaria and COVID-19 in the country's.
- Supported the establishment of event-based surveillance and SARI/ILI surveillance.



Points of entry, international travel, and transport

- Provided technical guidance as needed on surveillance among migrant populations at land borders.



National laboratories

- Provided test kits and other reagents and materials to the central laboratory on an ongoing basis.
- Provided technical guidance on sample collection and testing strategy for the surveillance of variants of the SARS-CoV-2 virus, based on PAHO/WHO guidelines and country capacity.
- Advocated for the use of rapid antigen test kits at the central and field levels, in keeping with the guidelines for use and the epidemiology of the pandemic.
- Provided technical cooperation for the strengthening

of PCR testing capacity for staff at the Central Laboratory/National Influenza Center.

- Collaborated in strengthening the National Influenza Center in gap analysis, stock management, and updated testing protocols for emerging and other infectious diseases.



Infection prevention and control and protection of the health workforce

- Conducted ongoing training of hospital health personnel in IPC measures and strengthened IPC protocols for the Academic Hospital to limit nosocomial transmission of COVID-19 and other respiratory diseases.
- Donated PPE and other hygiene supplies to the MoH, Regional Health Services, five elderly care homes, and community-based groups to help prevent transmission of COVID-19.
- Strengthened waste management in rural areas by installing Montfort incinerators at two health facilities and provided training in their use and maintenance for managing medical waste generated in the treatment of persons with COVID-19.
- Conducted a comprehensive analysis of existing structures, procedures, and resources in current approaches to IPC and antimicrobial resistance (AMR) stewardship to support recommendations and a roadmap to sustainably enhance and strengthen infectious disease care in Suriname to limit nosocomial transmission of respiratory and other pathogens.



Case management, clinical operations, and therapeutics

- Provided 50 oxygen concentrators, four ventilators, 20 patient monitors, 12 BiPaP machines, 260 oxygen tanks, 15 sphygmomanometers, and aprons to hospitals and health centers to manage cases of COVID-19.
 - Provided a four-to-six-month supply of essential medicines, including dexamethasone and enoxaparin, to support the clinical management of COVID-19.
 - Provided a six months' supply of tubing and other disposables for ventilators, donated to the MoH by other entities.
 - Trained medical technicians in all hospitals to manage the equipment provided.
 - Provided five computers to elderly homes to aid in the telemedicine approach to health care.
 - Trained general practitioners in the triage and management of COVID-19 in the primary care setting and home environment.
 - Translated 10 online courses into Dutch from OpenWHO's "Serving Countries" series of online courses and helped to set up a Suriname page on the platform. The "Serving Countries" channel provides educational materials to support a country's response, in IPC and clinical management, to the current COVID-19 outbreak and other health threats. To date, over 3,300 persons from Suriname have enrolled in these courses. Also translated into Dutch the OpenWHO online courses on long-term care facilities in the context of COVID-19 and occupational health and safety.
 - Supported training for nurses working in critical care to strengthen the management of severe/critical cases of COVID-19. Provided equipment and online access to the distance education training platform for the School of Nursing.
- Worked with a hospital care and supply coordination working group to identify biomedical equipment, PPE, and hygiene supply requirements for the national response.
 - Supported the expansion of the web-based patient information system to 18 additional clinics of the Medical Mission, thus allowing for a comprehensive analysis of how health services are delivered and of the teleconsultation/telemedicine features of the network. The modules on the logistics management of health commodities were improved.



Operational support, logistics, and supply chain

- Provided access to an online platform for the MoH's virtual meetings.
- Developed and delivered technical specifications to the MoH for a fully equipped ambulance, suitable for transporting patients from the interior of the country.
- Collaborated with the World Food Program to procure and deliver the donation of Suriname's most-equipped ambulance to date.
- Procured and delivered accessories for infusion pumps, seven emergency trolleys/crash carts, and PPE (gowns, gloves, masks, goggles, etc.) to support health facilities throughout the country, including primary care facilities in the interior and coastal area.



Maintaining essential health services during the pandemic

- Provided ongoing guidance on maintaining essential health services; provided promotional materials to strengthen the immunization program; and collaborated with the Ministry of Health to monitor and report on the maintenance of essential health services.

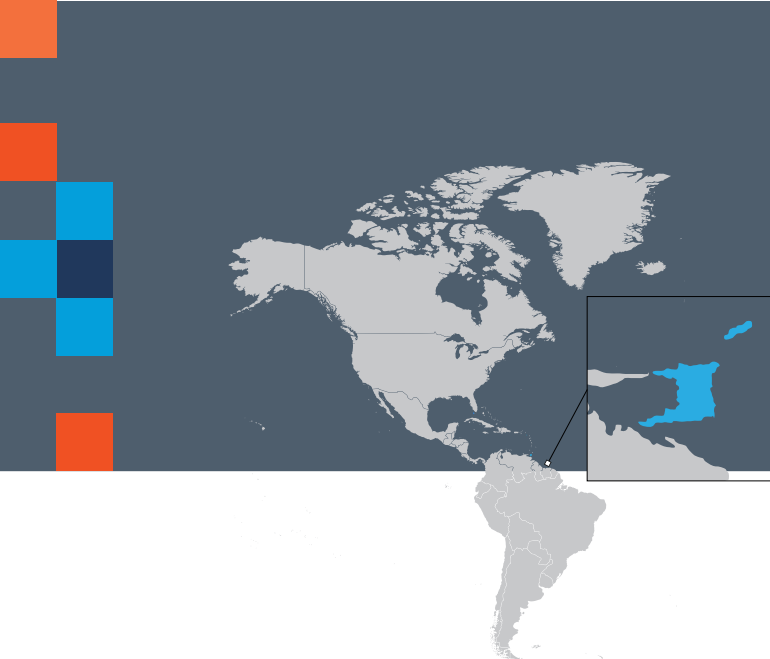
- Collaborated with the Suriname Red Cross to promote safe blood donation and disseminated promotional materials to encourage blood donors during the pandemic.
- Supported the development of an action work plan for MHPSS, in the context of the COVID-19 outbreak in the Americas.
- Conducted a Frontline Readiness Assessment on the delivery of essential health care services at the primary, secondary, and community levels in the context of COVID-19.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Provided technical cooperation for development of the National Deployment and Vaccination Plan (NDVP) for COVID-19 vaccines.

- Provided technical guidance, documentation, and cooperation to the National Drug Regulatory Committee and the National Immunization Technical Advisory Group in preparation for the NDVP and its implementation.
- Provided technical cooperation, in collaboration with the University of Oslo, to adapt and configure the DHIS2 database for data collection, collation, and analysis for COVID-19 vaccination.
- Facilitated the financial and in-kind collaboration and contribution of the private sector and businesses to support the launch of the COVID-19 vaccination campaign.
- Trained the national team in reporting, investigation, and analysis of adverse events following immunization, with emphasis on COVID-19 vaccination.
- Supported the development and dissemination of 35 pieces of print and electronic communication messages in Dutch and 10 other local languages to promote vaccination, using all forms of media, including social media.
- Provided technical, administrative, and logistical support for vaccination outreach missions to Amerindian and Maroon villages in western Suriname and mobile migrant populations in goldmining camps in the interior.
- Supported the expansion of the COVID-19 vaccination services of the Regional Health Services by providing equipment and supplies; supported the expansion of waiting areas to ensure adherence to public health safety measures.



Trinidad and Tobago



Country-level coordination, planning, and monitoring

- Updated the MoH Influenza Immunization Preparedness Plan.
- Made recommendations for reopening schools in the context of COVID-19 through a webinar for ministries of education and health, principals, and teachers in the Caribbean.
- Provided technical support to develop the National Policy on Immunization of Health care Workers.
- Collaborated with the World Bank and IDB to provide technical support to the MoH.
- Produced an assessment of the economic impact of COVID-19 on the health sector.



Risk communication and community engagement

- Launched a national COVID-19 vaccination communication campaign aimed at vulnerable populations to build confidence in and increase uptake of the COVID-19 vaccine. PAHO used both traditional means and digital media, including the distribution of branded masks and the use of channels such as grocery carts and screens, billboards, and posters.

- Developed the “PAHO on De Road” interview series, in which vaccine advocates in vulnerable communities delivered messages to assuage fears surrounding COVID-19 vaccines, address misinformation, and build vaccine confidence.
- Expanded community engagement with the following agencies:
 - UN Trinidad and Tobago Office, through community radio interviews to build awareness of gender-based violence; people living with disabilities; and vaccine hesitancy.
 - Supermarket Association, Medical Association, Ministry of Local Government, and NGOs, to distribute posters in targeted communities.
 - Producers of the popular Eye on Dependency community radio and social media program, to promote the rights of people living with disabilities and raise awareness about the efficacy of the COVID-19 vaccine.
 - IOM, through an exercise to support the migrant community and people living in vulnerable circumstances.
 - The Trinidad and Tobago Red Cross, to develop a COVID-19 community engagement plan.
 - IOM, UNHCR, Trinidad and Tobago Family Planning Association, and the Caribbean Med Labs Foundation, on a communication campaign to increase antigen testing, targeting Venezuelan migrants.

Media Engagement

- Held a media sensitization workshop for journalists, together with the Ministry of Health, on effective COVID-19 reporting.
- Published three op-eds in local media.

Data-Informed Communication

- Collaborated with the MoH to complete a qualitative study entitled “Knowledge, Attitudes and Behaviors of Young People in Trinidad and Tobago during the COVID-19 Pandemic.” Based on the results of the study, strategies are being developed to engage young people in health promotion and COVID-19-related activities.



Surveillance, rapid response teams, and case investigation

- Provided technical guidance to improve the collection and analysis of surveillance data.
- Developed a database on COVID-19 patients for use in evidence-informed decision-making..
- Delivered a presentation on the surveillance of respiratory illnesses and interruption of virus transmission through an online seminar for epidemiologists, persons working in surveillance, and contact tracers in the Caribbean.
- Provided a series of weekly one-hour training seminars for the MoH on advanced EpiEstim modeling methods, incorporating the use of Google Mobility to monitor incidence.



National laboratories

- Procured RNA extraction kits, enzymes, internal controls, swabs, N95 masks, oxygen concentrators, and PPE.

- Supported expansion of the diagnostic network using antigen-based detection tests.
- Trained 50 people from the MoH and Regional Health Authorities (RHAs) to upgrade their capacity for PCR testing as part of an expansion of laboratory testing capacity.
- Supported the virology laboratory of the University of the West Indies (UWI), Saint Augustine, to boost laboratory capacity for genomic sequencing of variants. Support included recruiting laboratory research and coordination staff and providing laboratory reagents for sequencing and testing. PAHO designated the UWI, Saint Augustine as a PAHO Reference Sequencing Laboratory for the COVID-19 Genomic Surveillance Regional Network.



Infection prevention and control and protection of the health workforce

- Supported the development of several IPC guidelines for different settings, including homes for the aged and long-term care facilities, children’s homes, residential facilities, and dialysis centers to prevent COVID-19 transmission.
- Supported development of the MoH guidelines for at-home quarantine and isolation of persons infected with COVID-19.
- Supported the development, printing, and distribution of four infection and control manuals, covering prevention and control of health care-associated infections, occupational safety and health, sterilization and disinfection, and environmental cleaning.



Case management, clinical operations, and therapeutics

- Supported capacity-building for 50 registered nurses, in collaboration with the UWI, in core competencies needed to work in critical care settings.
- Established a mental health and psychosocial support (MHPSS) coordination mechanism.
- Conducted four webinars on MHPSS with a range of target groups.
- Supported the development of an MHPSS Directory of Services, a one-stop hub for crisis support.



Operational support, logistics, and supply chain

- Developed and implemented a plan to address stockouts of medications, including those used for the management of COVID-19 patients.



Maintaining essential health services during the pandemic

- Supported the completion of a comprehensive occupational and environmental safety and health study (OESH) to determine risks to health care workers in the context of COVID-19.
- Hosted a Facebook Live session on breastfeeding and COVID-19, in recognition of World Breastfeeding Day, to encourage continued breastfeeding. A booklet was produced and advocacy training was conducted.
- Strengthened the health system's response to violence as part of the Spotlight Initiative. National clinical and policy guidelines on intimate partner violence and sexual violence were completed. PAHO met with RHAs to develop a methodology


and implement a plan for a gender-based violence health information management system, based on the IT infrastructure of PAHO's Perinatal Information System. PAHO distributed evidence-based materials to the RHAs to promote good practices in caring for and supporting survivors of gender-based violence in the context of COVID-19.

- Trained MHPSS service providers from ministries, departments, agencies, NGOs, professional associations, and academia on MHPSS monitoring and evaluation. The mhGAP program was evaluated, and a communications strategy and plan for a community-based mental health model of care were developed. A two-year implementation plan, with an M&E framework and budget, was developed for the national suicide prevention strategy 2021-2030. The suicide and self-harm data flow and reporting mechanism was assessed to help establish a national suicide surveillance system.
- Collaborated with the MoH to ensure the availability of medications through the PAHO Strategic Fund and facilitate loans of medications from other countries.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.

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- Provided technical support for the development of the National Deployment and Vaccination Plan.
 - Provided technical support to prepare the COVID-19 Vaccine Introduction Readiness Assessment Tool (VIRAT) reports.
 - Strengthened the capacity for an effective and efficient COVID-19 vaccine rollout by developing and conducting simulation exercises and training for more than 100 health care workers, who participated in short courses on immunology, virology, and communications.
 - Launched a quantitative and qualitative survey to ascertain the concerns, attitudes, and practices of health care workers about COVID-19 vaccines.
 - Provided technical support to launch an initiative and social media campaign to reach people living with NCDs and answer questions about COVID-19 vaccines and vaccination.
 - Initiated collaboration on the launch of Surveillance of Events Supposedly Attributable to Vaccine or Immunization (ESAVI) for 2022/23.



United Kingdom Overseas Territories

Anguilla - Bermuda - British Virgin Islands - Cayman Islands
Montserrat - Turks and Caicos Islands



Country-level coordination, planning, and monitoring

- Provided technical guidance to national authorities in Bermuda and the Cayman Islands to coordinate health sector activities, conduct needs assessments, and identify priorities.
- Provided Bermuda, the Cayman Islands, and the Turks and Caicos Islands with technical guidance for documenting public health and social measures for all phases of the response.
- Provided technical advice on operational support for the national EOC in the Turks and Caicos Islands.
- Provided technical guidance to Bermuda and the Cayman Islands on the scope of rapid response teams and community engagement.
- Provided guidance on outbreak response and risk mitigation strategies to senior government officials.
- Collaborated with the Ministry of Health and Wellness and Hazard Management in the Cayman Islands to prepare a section for inclusion in the RESEMBID Project: Building Resilience in the Caribbean Overseas Countries and Territories to Face the COVID-19 Pandemic and Future Health Emergencies.
- Provided logistical support for the coordination of meetings, the installation of national diagnostic capacity, management of outbreaks, and planning for the rollout of the COVID-19 vaccines.



Risk communication and community engagement

- Distributed communication materials (posters, banners, and parenting booklets) in Anguilla, the British Virgin Islands, and Montserrat.
- Distributed communication materials to the Turks and Caicos Islands on mental health, cyber safety, COVID-19 prevention, prevention of substance abuse, and gender-based violence. Also distributed PAHO and WHO corporate risk communication and public education materials.
- Trained community leaders in Anguilla, the British Virgin Islands, and Montserrat in psychological first aid.
- Facilitated a series of webinars on mental health and psychosocial support (MHPSS) to build individual and community resilience.
- Conducted the webinar “Variants of Concern Delta and Omicron: Transmissibility, Severity, and Impact on Social Mobility: What Will Drive Future Trends and Optimize our Response.”
- Developed and disseminated communications materials to address gaps in knowledge and concerns about COVID-19 vaccines. A discussion series, “A matter of fact,” was developed to inform and educate, helping to dispel concerns linked with vaccine hesitancy.

- Conducted a mass media campaign on MHPSS in Anguilla.

Surveillance, rapid response teams, and case investigation

- Disseminated COVID-19 case definitions and guidelines for laboratory molecular testing in Anguilla, Bermuda, the British Virgin Islands, the Cayman Islands, Montserrat, and the Turks and Caicos Islands.
- Trained national counterparts in Anguilla, Bermuda, and the Turks and Caicos Islands to use and manage Go.Data, WHO's contact tracing tool for capturing and monitoring the chain of transmission.
- Instructed national counterparts in Anguilla, the British Virgin Islands, and Montserrat on the use of EpiEstim and CovidSIM, mathematical models for short-term forecasting of COVID-19 cases.
- Provided the Turks and Caicos Islands with access to PAHO guidelines on epidemiological surveillance, contact tracing, case isolation, and quarantine of contacts for adaptation to the national context.
- Provided technical advice and support for expanding and strengthening contact tracing capacity in the Turks and Caicos Islands, including access to an online training course, data management tools, and standard operating procedures.
- Provided training for medical doctors and other health professionals in Anguilla, the British Virgin Islands, and Montserrat on WHO guidelines for ICD-10 coding of COVID-19 mortality.
- Disseminated latest updates on COVID-19 diagnostics, including recommendations for the use of rapid antigen tests for COVID-19 in Anguilla, the British Virgin Islands, and Montserrat.
- Collaborated with the Global Outbreak Alert and Response Network (GOARN) and the U.S. Centers for Disease Control and Prevention (CDC) to conduct a workshop on contact tracing in the Americas, which

included participants from the Turks and Caicos Islands.

- Strengthened surveillance capacities in Anguilla and the British Virgin Islands through the hiring of contact tracers, surveillance officers, and data entry clerks: also provided tablets and laptops to Anguilla, the British Virgin Islands, and Montserrat.

Points of entry, international travel, and transport

- Provided PAHO guidelines on COVID-19 and travel precautions at points of entry into Bermuda, the Cayman Islands, and the Turks and Caicos Islands.

National laboratories

- Strengthened laboratory capacity by conducting data reviews, troubleshooting sessions, and follow-up calls regarding laboratory diagnostics and theoretical aspects of molecular diagnostics and laboratory testing procedures. Molecular detection material and laboratory supplies (primers, probes, Ag-RDT, plastic material, reagents, and others) were sent to Bermuda and Dominica to support early testing and detection. RT-PCR testing for SARS-CoV-2 was performed at two laboratories in Bermuda and two in the Cayman Islands.
- Ensured that the Turks and Caicos Islands had access to reference laboratories for the referral of samples for PCR testing.
- Provided the Turks and Caicos Islands with technical advice for validating test results and external quality assessment samples after Public Health England provided equipment and training for staff to build real-time, in-country PCR capacity.
- Provided GeneXpert cartridges to strengthen the molecular diagnostic capacity of laboratories in Anguilla, the British Virgin Islands, and Montserrat.

- Provided sample collection kits (swabs and viral transport medium) and rapid antigen kits to strengthen SARS-CoV-2 diagnostic capacities in Anguilla.



Infection prevention and control and protection of the health workforce

- Supported the protection of health care workers by providing and distributing PPE; donated PPE to the Turks and Caicos Islands.
- Supported the MoH of the Turks and Caicos Islands by offering WHO and PAHO IPC and clinical management guidelines, online training resources, and virtual meetings.
- Prepared Anguilla for a “soft” reopening of borders by providing IPC training for ferry operators, taxi drivers, and hotel housekeeping staff.
- Delivered an online IPC course for 20 health care workers.
- Provided general training to health workers from the Eastern Caribbean countries to satisfy specific requests, such as IPC practices in intensive care units and for primary health care workers.
- Trained 20 staff from the Turks and Caicos Islands Ministry of Health on infection prevention and control.



Case management, clinical operations, and therapeutics

- Assisted the MoH of the Turks and Caicos Islands to plan for clinical and hospital surge capacity.
- Supported the MoH of Bermuda, the Cayman Islands, and the Turks and Caicos Islands with access to WHO and PAHO clinical management guidelines, online training resources, and virtual meetings.

- Held additional rounds of the Regional Caribbean EMT Coordination course (including three-day online trainings and webinars) to introduce CICOM to the Ministry of Health and coordinate adoption of the CICOM methodology for setting up medical coordination and information cells as a key function of health emergency operations centers (EOCs). This course was made possible by the participation of experts from UK Overseas Territories, including Bermuda, the Cayman Islands, and the Turks and Caicos Islands.



Operational support, logistics, and supply chain

- Delivered a shipment of masks to Anguilla, the British Virgin Islands, and Montserrat.
- Procured antigen test kits to support Anguilla.



Maintaining essential health services during the pandemic

- Collaborated with multidisciplinary teams from the Ministries of Health of Bermuda and the Cayman Islands to finalize the IHR States Party Annual Report.
- Provided PAHO and WHO guidelines to the Turks and Caicos Islands on selecting and maintaining essential health services.
- Guided Bermuda in technical aspects of the procurement of pharmaceuticals for essential health services.
- Trained national counterparts in Anguilla, the British Virgin Islands, and Montserrat to monitor the impact of COVID-19 on their national immunization programs and continued procurement of vaccines for the immunization program in the Turks and Caicos Islands through the PAHO Revolving Fund. PAHO guided Anguilla, the British Virgin Islands, Montserrat, and the Turks and Caicos Islands on PAHO recommendations for maintaining immunization programs in the context of COVID-19.

- Provided continued support for implementing an MHPSS project that included a series of webinars for health and allied personnel, as well as a communication campaign aimed at creating awareness and referral to mental health services for people affected by COVID-19 in the British Virgin Islands.
- Supported the Anguilla Crisis Intervention Support Team (ACIST) in the creation of a comprehensive directory of trained mental health, psychosocial support, and disaster management personnel.
- Introduced the HEARTS technical package in the British Virgin Islands as a means of increasing blood pressure control during the COVID-19 pandemic.
- Provided the MoH of the Turks and Caicos Islands and relevant stakeholders with updated information on the COVID-19 vaccines available from WHO, PAHO, and other scientific sites.
- Provided training for national immunization staff in Bermuda and the Cayman Islands on vaccine efficacy, safety, logistics, cold chain strengthening, waste management, vaccine surveillance system, and the management and set-up of immunization and ESAVI stations.
- Provided FAQs and other communication resources to support national planning for vaccine demand and the prioritization of target groups.

Vaccination

- Provided special briefings for health authorities from the Cayman Islands on the COVAX Facility.
- Provided the Turks and Caicos Islands with information on the COVAX Facility and its planned role in improving access to and future procurement of COVID-19 vaccines and the relationship of the COVAX Facility with the PAHO Revolving Fund.
- Supported the MoH of the Turks and Caicos Islands in developing a national COVID-19 vaccination plan, using WHO and PAHO guidelines, as well as the communications strategy.
- Hosted a discussion on ultra-cold chain logistics and equipment.
- Supported a workshop on the introduction of COVID-19 vaccines, including cold chain management.
- Collaborated with the Turks and Caicos Islands to address vaccine hesitancy by releasing public service announcements on COVID-19 to bolster continued communication efforts via traditional channels and through social media.
- Conducted COVID-19 vaccine rollout training for EPI managers, including reporting on ESAVI, in Anguilla, the British Virgin Islands, and Montserrat.
- Provided assistance to Bermuda through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.



Uruguay



Country-level coordination, planning, and monitoring

- Supported the Emergency Operations Center of the Ministry of Public Health (MSP).
- Collaborated with the MSP to update Uruguay's national Coronavirus Plan.
- Participated in interdisciplinary advisory groups to provide expert advice on the response to the COVID-19 pandemic.
- Extended technical cooperation to the MSP for the development of a dashboard of epidemiological information aimed at the general public.
- Supported development of the 2021 version of the epidemiologists' training course for technicians working in a variety of areas in the MSP, in collaboration with the Latin American Center for Human Economy (CLAEH).
- Worked with the MSP to systematize Uruguay's 2020 response to the pandemic. The summary of the [report](#), published in 2021, highlights the government's technical and policy decisions and their execution and outlines the roles and contributions of other relevant national actors.



Risk communication and community engagement

- Supported the design of informational and multimedia materials appropriate to the national context.
- Disseminated messages of critical importance on health, hygiene, physical distancing, mental health, and other issues to vulnerable groups through a variety of channels, including social media networks.
- Developed a communication campaign in support of the COVID-19 national vaccination plan, which addressed vaccine hesitancy, safety, and efficacy. The campaign was designed to build confidence in the national vaccination program, combat the infodemic, and motivate the population to get vaccinated.
- Conducted an awareness campaign on the importance of getting vaccinated. Appealing to a national sense of solidarity, its theme was: "Don't think only of yourself, do it for our people."
- Promoted a national campaign to thank the country's health workers, with the support of Uruguayan soccer star Edinson Cavani. At the peak of hospitalizations and at-home care, Cavani underscored the need to support health workers by getting vaccinated. The campaign's slogan was "A Country Supports You!"

- Within the framework of the MSP “Village to Village campaign,” produced two video stories: one about vaccination teams that traveled the country and another about people living in remote locations who traveled to the nearest town to get vaccinated.

Surveillance, rapid response teams, and case investigation

- Trained surveillance staff and provided tools and equipment to improve the epidemiological surveillance system’s ability to detect cases of COVID-19.
- Supported the provision of essential materials as a contingency reserve.
- In coordination with a national university, trained the epidemiological team that was participating in a diploma program.
- Strengthened capacity in information analysis and dissemination.
- Offered a training course for the virology section of the National Reference Laboratory to strengthen SARS-CoV-2 genomic surveillance capacity. Genomic sequencing studies conducted by the MSP led to the publication of the first report on the complete SARS-CoV-2 genome in Uruguay.

Points of entry, international travel, and transport

- Developed communication materials for travelers arriving at ground and air points of entry.
- Contributed to the launch of mass media campaigns to raise awareness among people arriving from abroad.

- Supported a seroprevalence study on COVID-19, focusing on the border city of Rivera-Livramento (Uruguay–Brazil), and an evaluation of the social and health impact of emergency health measures among the Rivera population. The study was conducted by the National University, the Pasteur Institute, and the MSP.

National laboratories

- Facilitated South–South cooperation between the governments of Chile and Uruguay to strengthen SARS-CoV-2 sequencing in Uruguay.
- Purchased and donated materials for COVID-19 testing.
- Supported the MSP in expanding its diagnostic capacity by providing kits, endorsed by PAHO, containing rapid diagnostic tests for the detection of SARS-CoV-2 antigens.
- Developed two training courses entitled “Training Trainers,” delivered to health personnel from institutions in the country’s 19 departments.
- Supported the MSP in strengthening its genomic surveillance capacity for SARS-CoV-2 by providing supplies and offering a training course for the ministry’s Department of Public Health Laboratories (DLSP).
- Supported the DLSP genomic sequencing studies, which led to the publication of a report on the first complete genome of SARS-CoV-2 in Uruguay.

Infection prevention and control and protection of the health workforce

- Delivered PPE to national authorities for use by emergency health staff.

- Provided financial support and facilitated collaboration with relevant institutions to enable local production of 23,000 face shields, under an agreement between the University of the Republic, the University of Labor, and civil society organizations involved in design and innovation.



Case management, clinical operations, and therapeutics

- Supported national health authorities in adopting and implementing strategies for the care of patients with COVID-19.
- Helped strengthen national capacity for the detection and surveillance of SARS-CoV-2.
- Provided digital support equipment (webcams, speakers, monitors) to strengthen remote or tele-consultations at the primary health care level.



Operational support, logistics, and supply chain

- Consolidated the health sector's resource needs and created a contingency reserve of PPE and materials to close critical gaps.
- Collaborated with the MSP to ensure the continuity of Uruguay's vaccination programs and the purchase of vaccines.



Maintaining essential health services during the pandemic

- Provided up-to-date guidelines and recommendations on maintaining essential health services during the pandemic and strengthening the first level of care.


- Supported the sustainability of key public health and other programs by donating medical equipment, including five portable ultrasound machines; 10 multiparametric monitors; pulse oximeters; and ophthalmoscopes to respond to the demand for services due to COVID-19 at the hospital and primary care levels.

- Supported the 2020 and 2021 national surveys on the continuity of essential health services during the COVID-19 pandemic, which PAHO later administered at the regional level and disseminated the results.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19 vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.
- Developed a strategy to support implementation of the vaccination plan, which included ensuring the quality of COVID-19 vaccines and combating the infodemic surrounding vaccinations.
- Launched a campaign to raise awareness and encourage COVID-19 vaccination in Uruguay. As part of another campaign carried out with UNICEF, children were allowed to express their concerns and direct questions to scientists.

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- Developed an updated version of the COVID-19 vaccination course for the Uruguay Node of the Virtual Campus for Public Health, in coordination with the Nursing School of the University of the Republic, and under the auspices of the MSP. As of August 2021, 5,219 health workers had enrolled in the course, and 3,311 people had graduated. Twenty-four countries from different regions have also participated in the course.
 - Provided support to equip a mobile vaccination center for the country's Commission to Fight Tuberculosis and Endemic Diseases, which administered vaccinations nationwide as part of the "Town to Town, Neighborhood to Neighborhood" campaign, organized by the MSP in August 2021. This campaign facilitated access to vaccination for people who were unable to reach vaccination centers or had difficulty with electronic scheduling.



Venezuela Bolivarian Republic of



Country-level coordination, planning, and monitoring

- Coordinated with the main partners in the country, the Ministry of People's Power for Health (MPPS), the National Institute of Hygiene, health cluster institutions, and representatives of civil society, with a focus on vaccination, patient care, epidemiological surveillance, and infection prevention and control as linchpins of the effort.
- Facilitated the signing of an agreement by national entities to protect health during the pandemic, focusing on surveillance, diagnostics, access to PPE, decentralization of testing, and prioritization of the most affected states.
- Supported the country's national COVID-19 response plan, with emphasis on strengthening prevention, primary health care, and the delivery of in-hospital services.
- Implemented six projects related to COVID-19 with the following objectives: to serve the needs of the Venezuelan people; save lives; reduce contagion; give priority access to PPE; enable access to diagnostic tests; and strengthen hospitals.
- Worked with the MPPS to strengthen health facilities designated as COVID-19 response sites in 24 states. Supported six field health offices created to carry out priority activities for COVID-19 prevention and control, particularly at border crossings.

- Facilitated bilateral coordination meetings between health authorities from Colombia and Venezuela to formulate strategies to protect the health of people living in the border areas.
- Led the Health Action Group and five subnational groups, convening more than 65 partners (national and international NGOs, representatives of the United Nations System, and donors) to coordinate the health sector's humanitarian response.
- Coordinated the boosting of technical capacity with national authorities in the context of COVID-19; the formation of work teams; the organization of services and activities aimed at saving lives; and the establishment of international agreements.



Risk communication and community engagement

- Supported the MPPS in disseminating stickers with information on COVID-19 prevention measures and antigen-based rapid diagnostic tests; produced posters on handwashing (English and Spanish) for placement at airports and on the correct use of PPE and proper hospital hygiene.
- Partnered with Digitel to send 1.5 million SMS messages to the public on COVID-19 prevention and living with quarantine measures.
- Designed communication materials aimed at

pregnant women and the community: cards for social networks, posters, and flyers with information on pregnancy, childbirth, and breastfeeding during the COVID-19 pandemic.

- Adapted materials with information on alternatives for handwashing in coordination with UNICEF; prepared an online video with messages about hygiene and infection control in hospitals.
- Organized a conversation with directors and journalists from 17 national media groups to brief them on the #TakeitSeriously prevention campaign.
- Produced COVID-19 audio prevention programs at the community level through a campaign called “Protect yourself and protect others.”
- Supported implementation of a national communication campaign aimed at mitigating COVID-19 risks related to IPC, mental health, family health, the health of older persons, etc.
- Created audiovisual materials targeting the most vulnerable populations that feature an intercultural approach designed to reach indigenous peoples, employing a gender approach.



Surveillance, rapid response teams, and case investigation

- Advised and supported the MPPS in analyzing the clinical-epidemiological database of confirmed cases of COVID-19; health personnel who contracted COVID-19; and a situation analysis in each country.
- Promoted modular technological developments in the Unified Health Information System (SUIS) for uploading and analyzing statistics on country reporting.
- Provided support to establish a national central SIG core to facilitate the monitoring of COVID-19.
- Advised the MPPS on the use of the ICD coding

system, updated by WHO, in which COVID-19 has been included as a cause of death.

- Equipped 10 health situation rooms in six border states with technology; provided training and training materials on the principles of epidemiology for disease control; offered technical advice on the analysis of epidemiological information on COVID-19 and other public health events.
- Provided orientation for the national data management teams on the analysis of COVID-19 cases, morbidity, comorbidity, and mortality indicators.



National laboratories

- Provided training, technical support, and supplies for the molecular detection of COVID-19 to the Rafael Rangel National Institute of Hygiene, the country's reference laboratory.
- Delivered supplies to the Venezuelan Institute of Scientific Research (IVIC), which has the capacity for genomic sequencing of the SARS-CoV-2 virus. Information on the IVIC is available on the website of the PAHO Genomic Surveillance Network.
- Worked with the MPPS, the National Institute of Hygiene, and regional governments to decentralize the collection of PCR tests and expand the country's diagnostic capacity using rapid antigen tests.
- Acquired 340,000 antigen tests and 35 test readers with national funding; 120,025 additional antigen tests were supplied with PAHO's support.
- Trained laboratory technicians and helped formulate protocols on the use of antigen-based detection tests and equipment deployed in the national diagnostic network to bring diagnostic testing to hard-to-reach areas and highly vulnerable populations.

- Provided technical advice to strengthen the national laboratory network, including the National Laboratory with its two mobile laboratories, for diagnosis, training, and reporting of results, and provided 48 rapid antigen diagnostic kits and 340,000 test kits.
- Provided support with advice, capacity-building, technical documents, supplies, logistics, and the donation of vehicles to the National Laboratory to strengthen its diagnostic capacity.



Infection prevention and control and protection of the health workforce

- Trained health workers in IPC measures and protocols, including for obtaining samples; isolating patients; and proper use of PPE. Organized a roundtable with the MPPS and the Venezuelan Society of Infectious Diseases (SVI) to launch a program and carry out IPC activities and provided training.
- Distributed essential medicines, personal protective equipment, and hygiene kits to hospitals in Caracas and 23 states. Distributed over 77 tons of PPE for health care workers working on the frontlines of the pandemic.
- Supported the analysis of technical documents of the Venezuelan Society of Infectious Diseases to implement protocols for the use of PPE and hospital sterilization, as well as the MPPS documents on hospital-acquired infections.
- Standardized PAHO audiovisual materials with the MPPS and the Venezuelan Society of Infectious Diseases (SVI) for use in a health risk communication campaign in hospitals.
- Supported the development of a respiratory infection prevention and control guide, with emphasis on COVID-19.

- Provided materials and supplies aimed at improving hygiene and cleaning in hospitals to manage COVID-19 cases.
- Improved access to water, sanitation, and solid waste disposal in 19 hospitals for the care of COVID-19 patients.
- Reactivated the Committee for Control of Health care-associated Infections (HAIs) at 19 hospitals, with various sources of funding.



Case management, clinical operations, and therapeutics

- Supported the MPPS committee on therapeutics in case detection and the exchange of best practices for the clinical management and treatment of COVID-19.
- Trained health workers in case management, with a focus on therapeutics, and in the expansion and reorganization of health services.
- Conducted a joint assessment with health authorities on the readiness of hospitals to handle COVID-19 cases.
- Provided 32 hospitals that treat COVID-19 patients with specialized mechanical ventilators and corresponding accessories, electrocardiographs, mobile equipment for confirmation of cases (RT-PCR and antigen-based), medicines, and critical hospital supplies. Management of comorbidities includes hypertension, diabetes, HIV, tuberculosis, and malaria.
- Shared technical expertise on how to address COVID-19 with the academic community in the country context.
- Organized videoconferences on managing cardiovascular issues and diabetes and obesity during the pandemic.

- Supported the national case management commission in developing care protocols and organizing personnel in health service networks for COVID-19 case management following the recommendations of PAHO.
- Provided technical advice for the reorganization of health services and hospital beds, as well as capacity building consistent with the evolving of evidence.
- Provided training for health workers, epidemiology units, primary health care clinics, specialized centers, and hospitals to improve the capacity for early detection of COVID-19 cases.



Operational support, logistics, and supply chain

- Mobilized over 1,447 tons of medicines, diagnostic and laboratory supplies, PPE, medical equipment, medical supplies, and hygiene and communication materials for the COVID-19 pandemic response throughout the year.
- Strengthened logistical management in the warehouses of 22 hospitals; provided office supplies, computers, and printers; and trained 122 staff to use the PAHO LSS/SUMA Logistics Support System.
- Procured and facilitated transportation and storage of personal protective equipment, medicines, and supplies, as well as direct delivery to COVID-19 treatment facilities.
- Provided PPE to 308 public and civil society health institutions that treat COVID-19 patients. This covered an estimated 80,000 health workers.
- Hired technical staff on logistics and operations to support activities under of the COVID-19 response plan.



Maintaining essential health services during the pandemic

- Trained 99 health and community workers in the Mental Health Gap Action Program (mhGAP) for basic psychosocial support and mental health assistance.
- Deployed 90 kits to 32 hospitals in the country, with over 20 tons of supplies and medicines, making it possible for the recipient hospitals to provide care for morbidities that are risk factors for COVID-19.
- Improved the response capacity of the emergency services in at least 27 hospitals, providing equipment, supplies, and medicines.
- Provided advice on the reorganization of hospital services and beds. Additionally, situational training was provided for staff, as needs changed.
- Supplied hospitals and NGOs with medicines and supplies for noncommunicable chronic diseases, with an emphasis on the prevention and control of cardiovascular problems, diabetes, and cervical cancer, in the context of COVID-19.
- Strengthened comprehensive care for women, children, and adolescents, with emphasis on reducing maternal and child morbidity.
- Provided capacity-building and developed a national mental health campaign aimed at health care workers and the general public.



Vaccination

- Provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements, providing updates on market dynamics and financial projections to estimate investment in COVID-19

vaccines; demand planning for routine immunization programs and procurement of other supplies required for vaccination; international bidding and joint tender with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinating and monitoring international logistics; advocating for donations to the Region and supporting coordination and country readiness.

- Worked with the country to develop the COVID-19 Vaccine Deployment Plan with its proposed goal of reaching 70% of the population. Provided technical support to the national COVID-19 vaccination plan and the technical vaccination work group.
- Coordinated the arrival and delivery of 11.1 million doses of COVID-19 vaccine.

- Provided technical and financial support for the cold chain, acquisition of syringes, and training for vaccination personnel, all vital activities for proper vaccine storage.

- Formed the National Coordination Committee with participation of different technical groups.

- Hired national professional consultants who supported planning, coverage monitoring, and logistics to improve vaccination coverage.

- Supported the country in defining these priority groups, while considering different epidemiological scenarios, and developing vaccination strategies.

- Supported implementation of the national strategy for the surveillance of adverse events following immunization (AEFI).



Abbreviations

ACT-A	Access to COVID-19 Tools Accelerator	EOC	Emergency Operations Center
ACTO	Amazon Cooperation Treaty Organization	EPI	Expanded Program on Immunization
AEFI	Adverse Events Following Immunization	EpiEstim	COVID-19 Modeling Tool
Ag-RDT	Antigen-based Rapid Diagnostic Test	ESAVI	Events Supposedly Attributable to Vaccination or Immunization
AMC	Advance Market Commitment Mechanism	ESFT	Essential Supplies Forecasting Tool
AMCS	Alternative Medical Care Sites	EUL	Emergency Use Listing Procedure
ARVs	Antiretrovirals	EW	Epidemiological Week
BRISA	Regional Database of HTA Reports in the Americas	FAO	Food and Agriculture Organization
CARICOM	Caribbean Community	FIND	Foundation for Innovative New Diagnostics
CARPHA	Caribbean Public Health Agency	FLOD	First Line of Defense
CDC	U.S. Centers for Disease Control and Prevention	GAVI	Global Alliance for Vaccines
CEPI	Coalition for Epidemic Preparedness Innovations	GBV	Gender-based Violence
CERF	Central Emergency Response Fund	GISAID	Global Initiative on Sharing All Influenza Data Platform
CFR	Case Fatality Rate	HTA	Health Technology Assessments
CHW	Community Health Worker	IBS	Incident-based Surveillance
CICOM	Medical Coordination and Information Cells	ICAO	International Civil Aviation Organization
CME	Continuing Medical Education	ICRC	International Federation of the Red Cross
COMISCA	Council of Ministers of Health of Central America	ICTRP	International Clinical Trials Registry Platform
CovidSIM	COVID-19 Modeling Exercise	IHR	International Health Regulations
COVIGEN	COVID-19 Genomic Surveillance Regional Network	ILO	International Labor Organization
CVIC	Vaccine Introduction and Deployment Costing Tool	IMCI	Integrated Management of Childhood Illness
EBS	Event-based Surveillance	IMST	Incident Management Support Team
ECC	Eastern Caribbean Countries	IMT	Incident Management Team (country level)
ECLAC	Economic Commission for Latin America and the Caribbean	INGRID-H	Disability Inclusion in Hospital Disaster Risk Management
EIOS	Epidemic Intelligence from Open Sources	IOM	International Organization for Migration
EMT	Emergency Medical Team(s)	IPC	Infection Prevention and Control
		IVD	In Vitro Diagnostics
		JRF	WHO/UNICEF Joint Reporting Format

LAC	Latin America and the Caribbean	RCCE	Risk Communication and Community Engagement
MERCOSUR	Southern Common Market	RDT	Rapid Diagnostic Test
MFA	Ministry of Foreign Affairs	REVELAC-i	Network for Evaluation of Vaccine Effectiveness in LAC – influenza
Mh-Gap	Mental Health Gap Action Program (WHO)	RF	PAHO Revolving Fund for Access to Vaccines
MHPSS	Mental Health and Psychosocial Support	SAGE	Strategic Advisory Group of Experts on Immunization
MINSAP	Ministry of Public Health (Cuba)	SARI / ILI	Severe Acute Respiratory Illness/ Influenza-like Illness
MIS	Multi-inflammatory Syndrome	SARS-CoV-2	Severe Acute Respiratory Syndrome Coronavirus 2
MOH	Ministry of Health	SFC	Self-financing Countries
MOHW	Ministry of Health and Wellness	SICA	Central American Integration System
MPTF	Multi-Partner Trust Fund	SISTOCK	PAHO/WHO Regional Stock System
NCD	Non-communicable Diseases	SPRP	Strategic Preparedness and Response Plan for COVID-19 (WHO)
NDVP	National Deployment and Vaccination Plan	SUMA	PAHO/WHO Supply Management System
NIC	National Influenza Centers	TAG	Technical Advisory Group
NIP	National Immunization Program	UCC	Ultra-cold Chain
NITAG	National Immunization Technical Advisory Group	UNCT	UN Country Team
NRA	National Regulatory Agency	UNDP	United Nations Development Program
OECD	Organisation for Economic Co-operation and Development	UNESCO	UN Educational, Scientific and Cultural Organization
ORAS	Andean Health Agency	UNETT	United Nations Emergency Technical Team
PAHO	Pan American Health Organization	UNFPA	United Nations Population Fund
PCR	Polymerase Chain Reaction	UNHCR	UN Refugee Agency
PHC	Primary Health Care	UNHRD	UN Humanitarian Response Depot
PHEIC	Public Health Emergency of International Concern	UNICEF	UN Children's Fund
PPE	Personal Protective Equipment	UNRCO	Office of the UN Resident Coordinator
PRAIS	Regional Platform on Access and Innovation for Health Technologies	UWI	University of the West Indies
PROSUR	Forum for the Progress and Development of South America		



VCPH	Virtual Campus for Public Health (PAHO)	VWA	Vaccination Week in the Americas
VIRAT	Vaccine Introduction Readiness Assessment Tool	WASH	Water, Sanitation, and Hygiene
VOC	Variants of Concern	WFP	World Food Program
VOI	Variants of Interest	WHO	World Health Organization



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